Appendix B
Meteorological Data

This section contains meteorological data derived from various regulatory and non-regulatory sites. The data provides a comparative analysis of winds speed, wind direction, wind gusts and concentration data. Please note that meteorological instruments measure at different heights, and at different time intervals. By taking, the actual time of measurement and assuring that all data represented is in Pacific Standard Time (PST) there is uniformity of the data. In addition, not all stations measure at the exact same time, i.e. measurements at 053 and 056 therefore, comparisons are measurements within a 60-minute period. While there may be some overlapping and slight differences the comparative analysis provides the reader with a better understanding of the regional effect of the Exceptional Event.

FIGURE B-1
METEOROLOGICAL SITES IN SOUTHEASTERN CALIFORNIA AND YUMA, ARIZONA

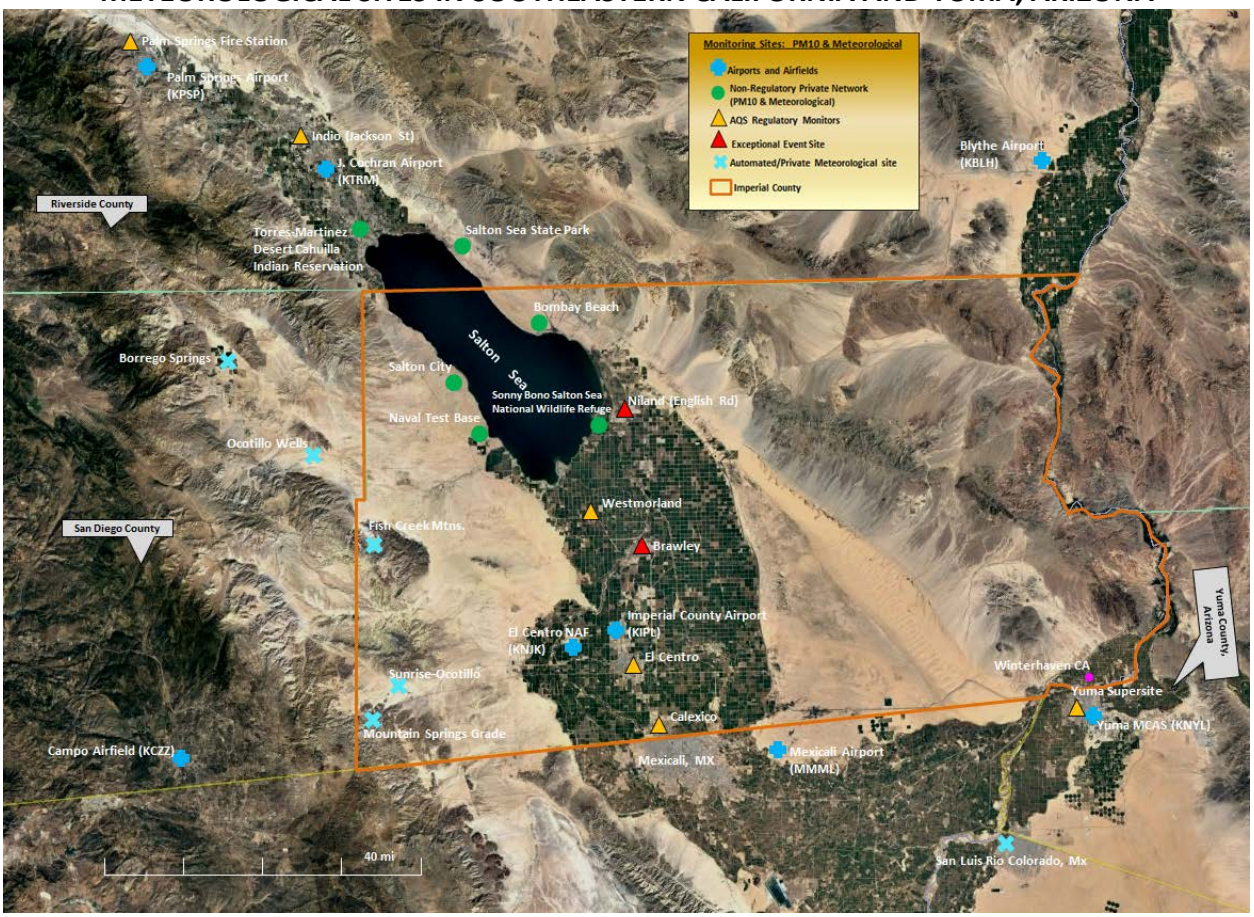
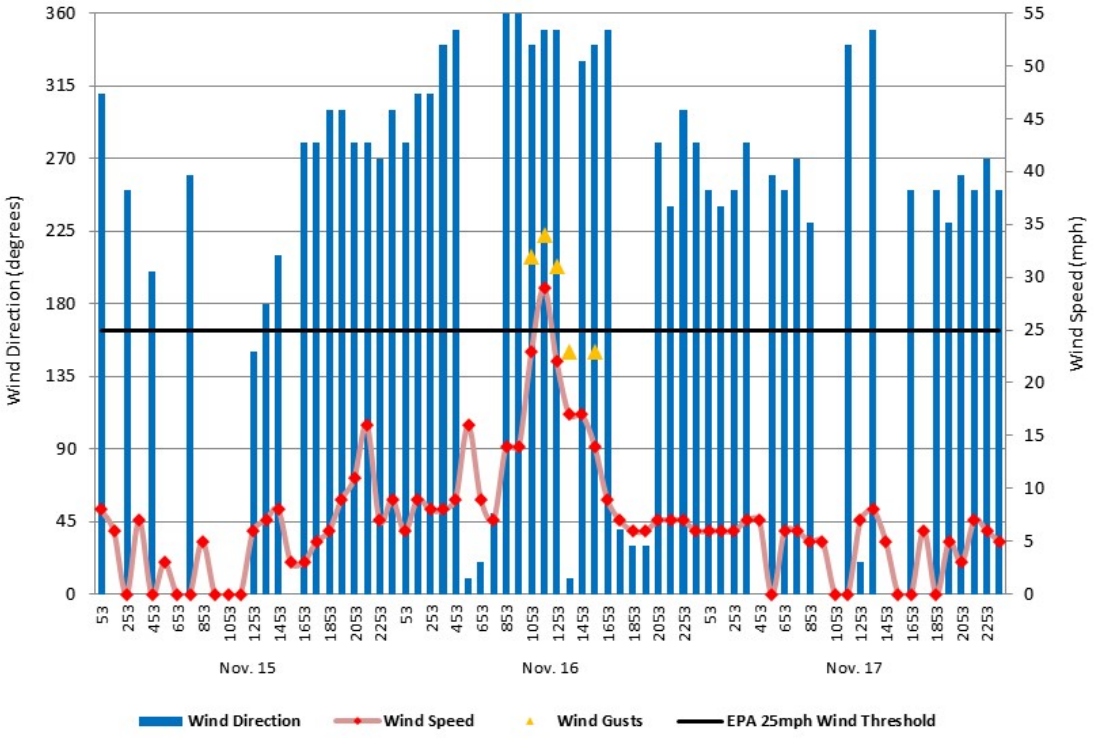


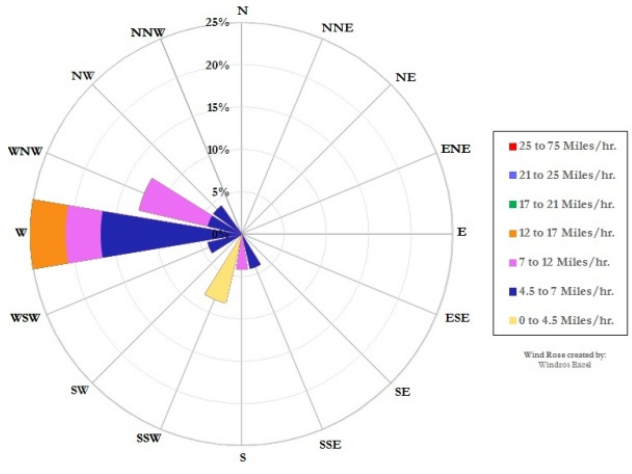
Fig B-1: This image shows the meteorological sites and the air quality monitoring sites used in this document. Google Earth base map. Inset locator map of California from Wikipedia

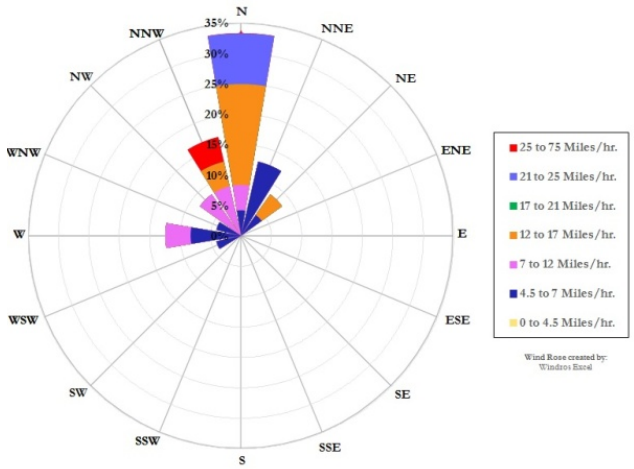
IMPERIAL COUNTY SITES

FIGURE B-2
IMPERIAL COUNTY AIRPORT
WIND SPEED, GUSTS & DIRECTION



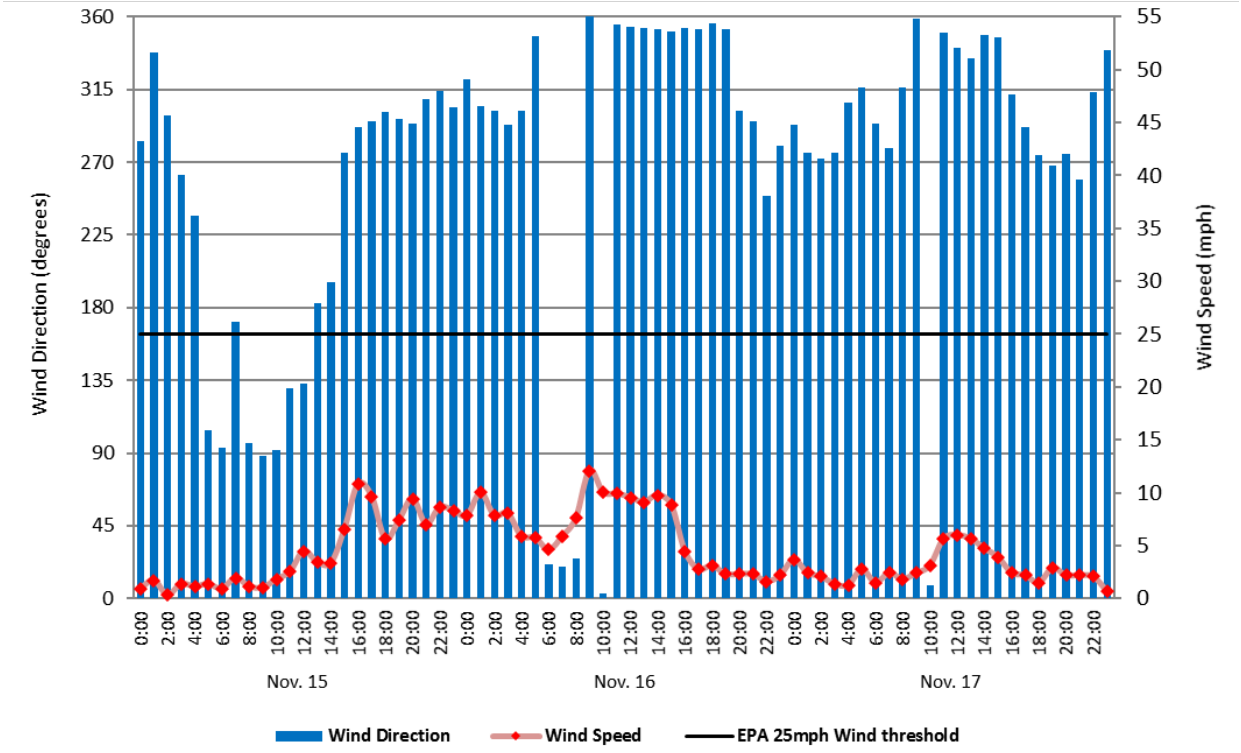
FIGURES B-3 & B-4
IMPERIAL COUNTY AIRPORT WIND ROSES – NOVEBER 15 & 16



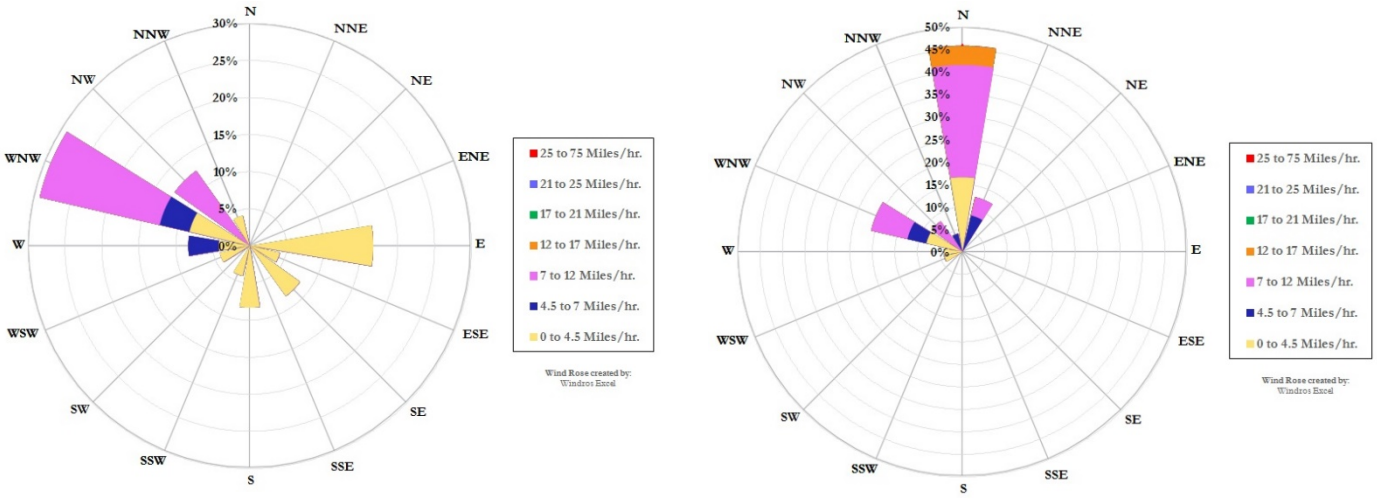


Figs. B-2 through B-4: Imperial Airport meteorological data shows a distinct shift in wind direction from November 15 (left) to November 16 (right rose). Wind data from NCEI'S QCLCD system.

FIGURE B-5
CALEXICO
WIND SPEED & DIRECTION

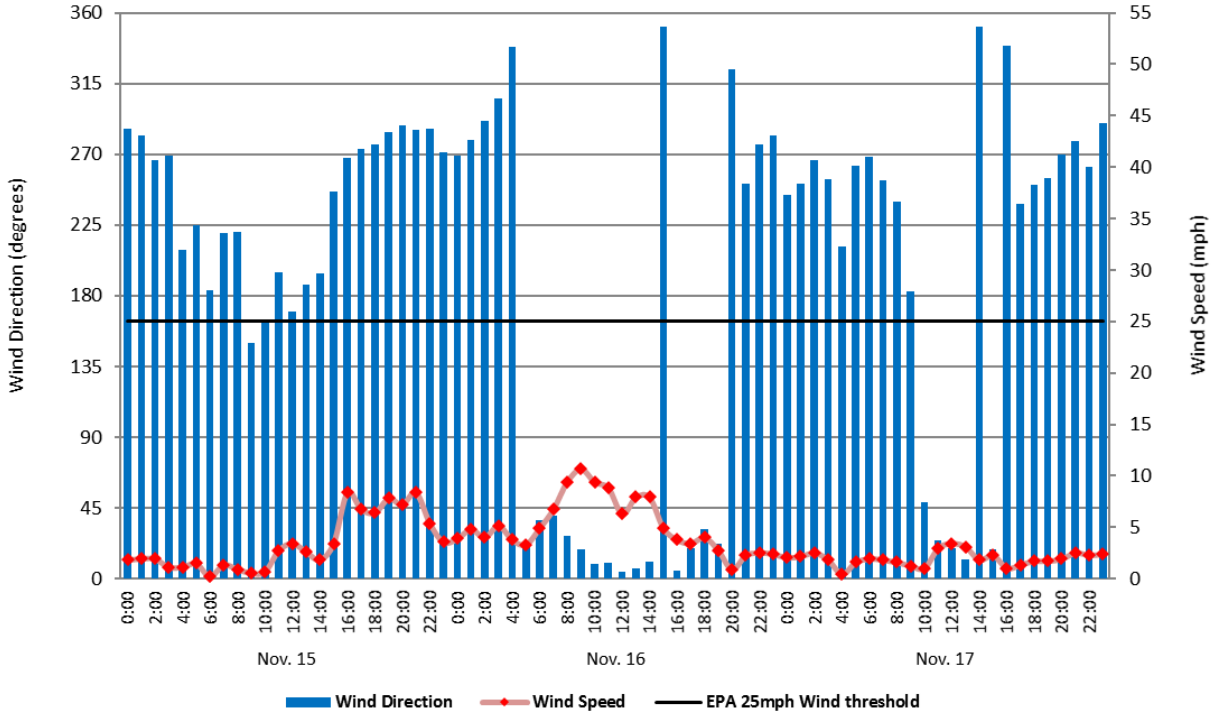


FIGURES B-6 & B-7
CALEXICO WIND ROSES – NOVEBER 15 & 16

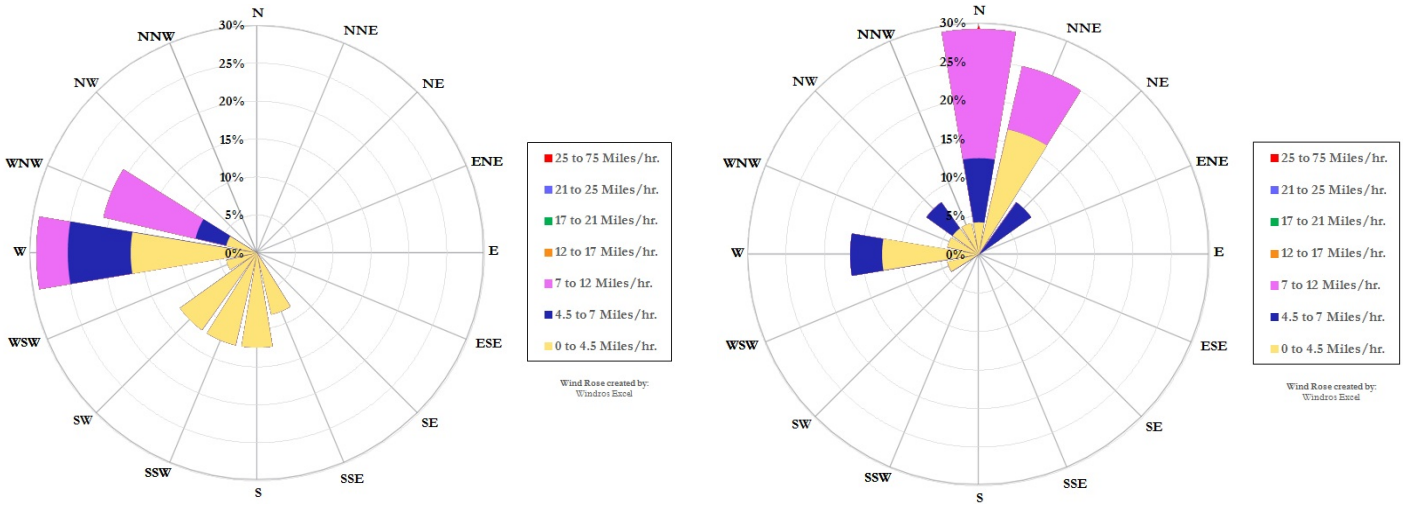


Figs. B-5 through B-7: Calexico meteorological data shows a distinct shift in wind direction from November 15 (left) to November 16 (right rose). Wind data from the EPA's AQS data bank.

FIGURE B-8
EL CENTRO (9th St)
WIND SPEED & DIRECTION

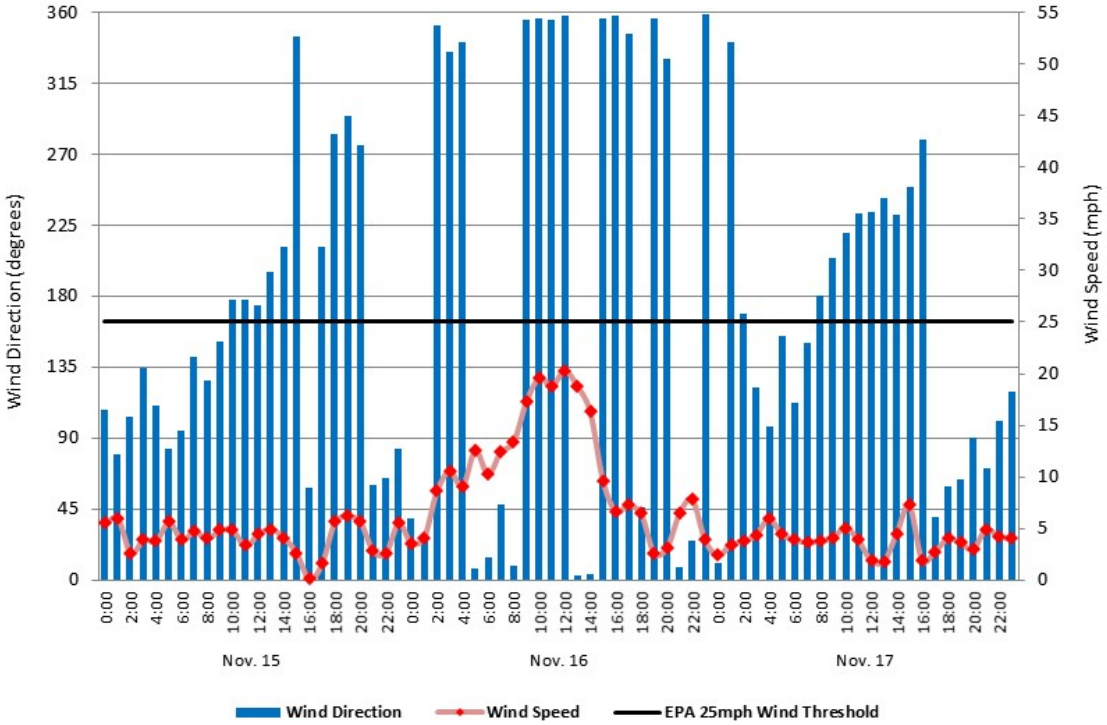


FIGURES B-9 & B-10
EL CENTRO (9th St) WIND ROSES – NOVEBER 15 & 16

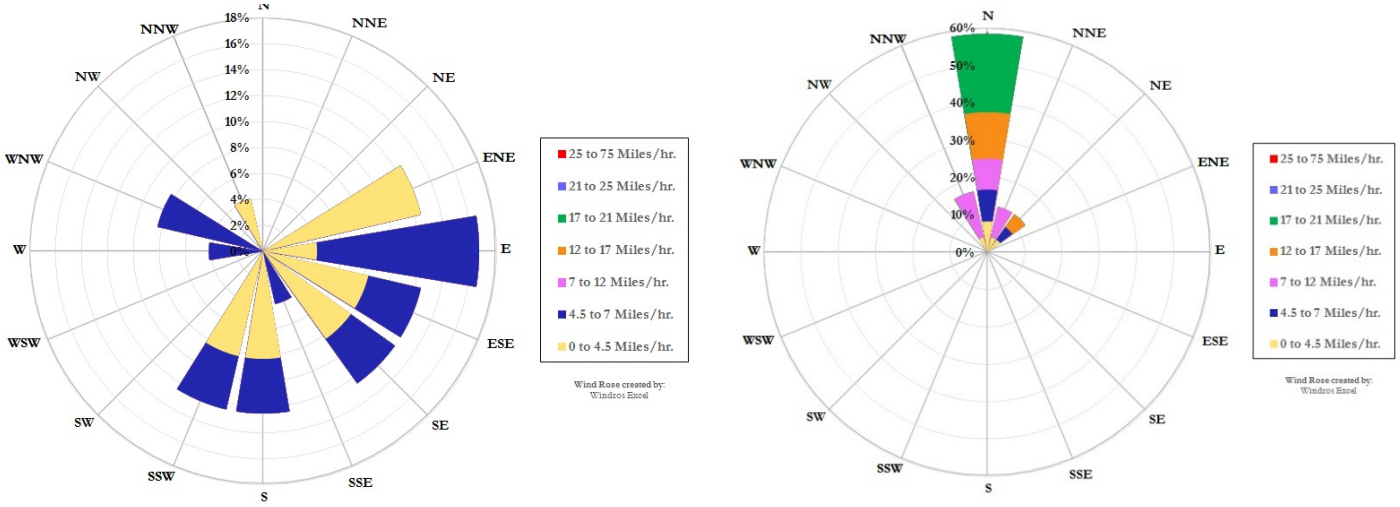


Figs. B-8 through B-10: El Centro meteorological data shows a distinct shift in wind direction from November 15 (left) to November 16 (right rose). Wind data from the EPA's AQS data bank.

FIGURE B-11
NILAND (ENGLISH RD)
WIND SPEED & DIRECTION



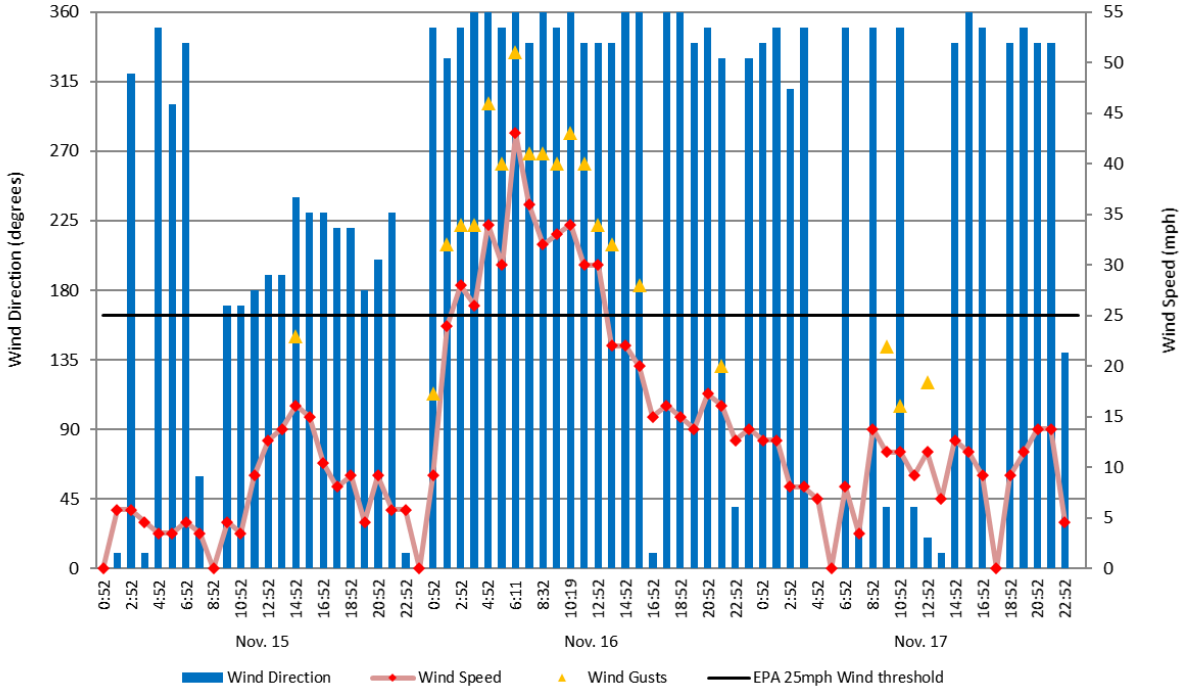
FIGURES B-12 & B-13
NILAND (ENGLISH RD) WIND ROSES – NOVEBER 15 & 16



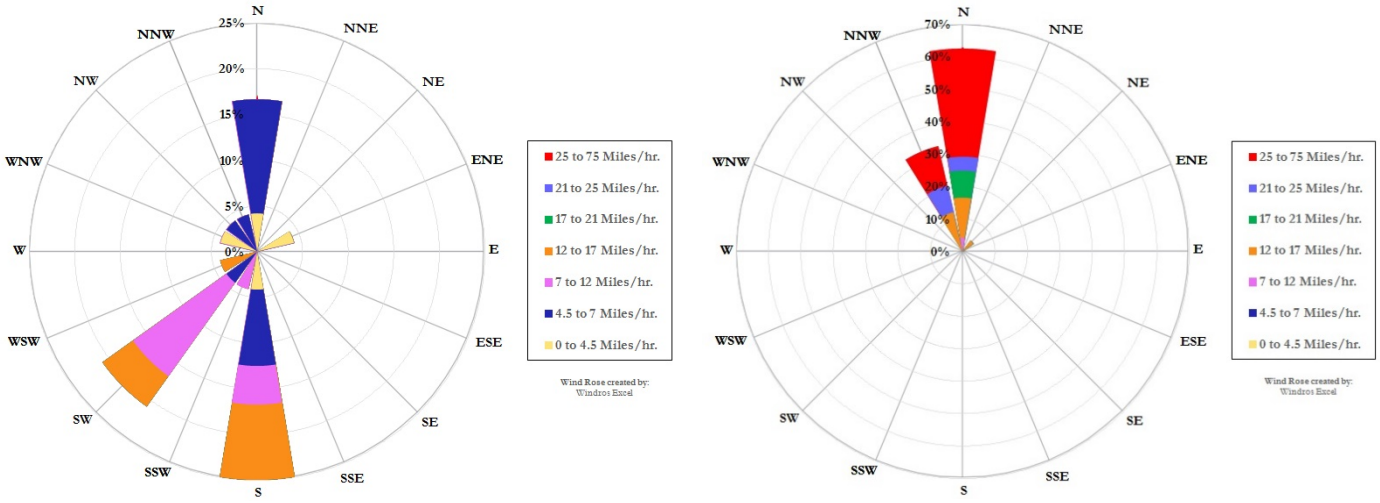
Figs. B-10 through B-13: Niland meteorological data shows a distinct shift in wind direction from November 15 (left) to November 16 (right rose). Wind data from the EPA's AQS data bank.

EASTERN RIVERSIDE COUNTY

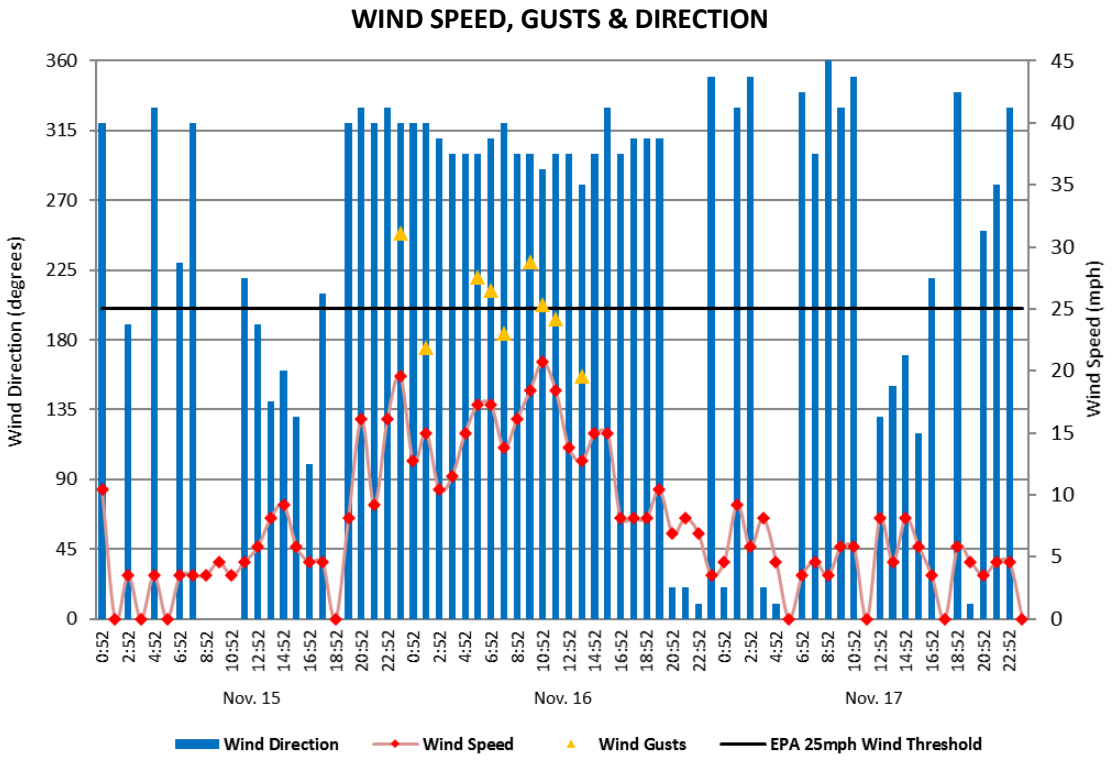
FIGURE B-14
BLYTHE AIRPORT (KBLH)
WIND SPEED, GUSTS & DIRECTION



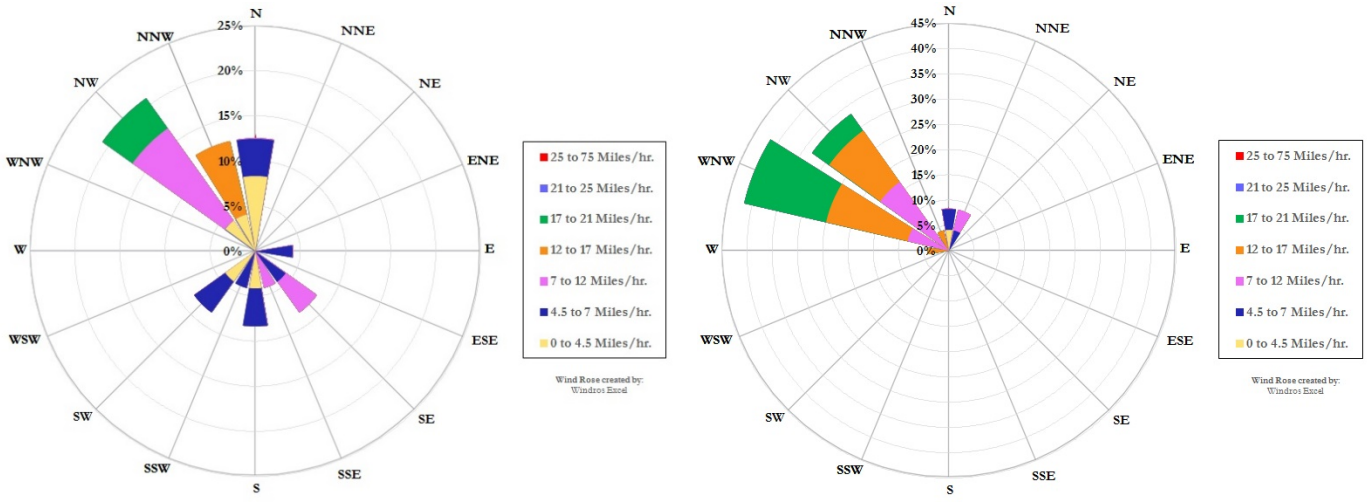
FIGURES B-15 & B-16
BLYTHE (KBLH) WIND ROSES – NOVEBER 15 & 16



Figs. B-14 through B-16: This airport served as an important upstream site during the wind event of November 16, 2014. Northerly winds and gusts measured at Blythe were responsible for transporting dust into Imperial County. Wind direction shifted dramatically from November 15 (left rose) and November 16 (right rose). Wind data from the University of Utah's MesoWest system.**FIGURE B-17**
JACQUELINE COCHRAN AIRPORT (KTRM)

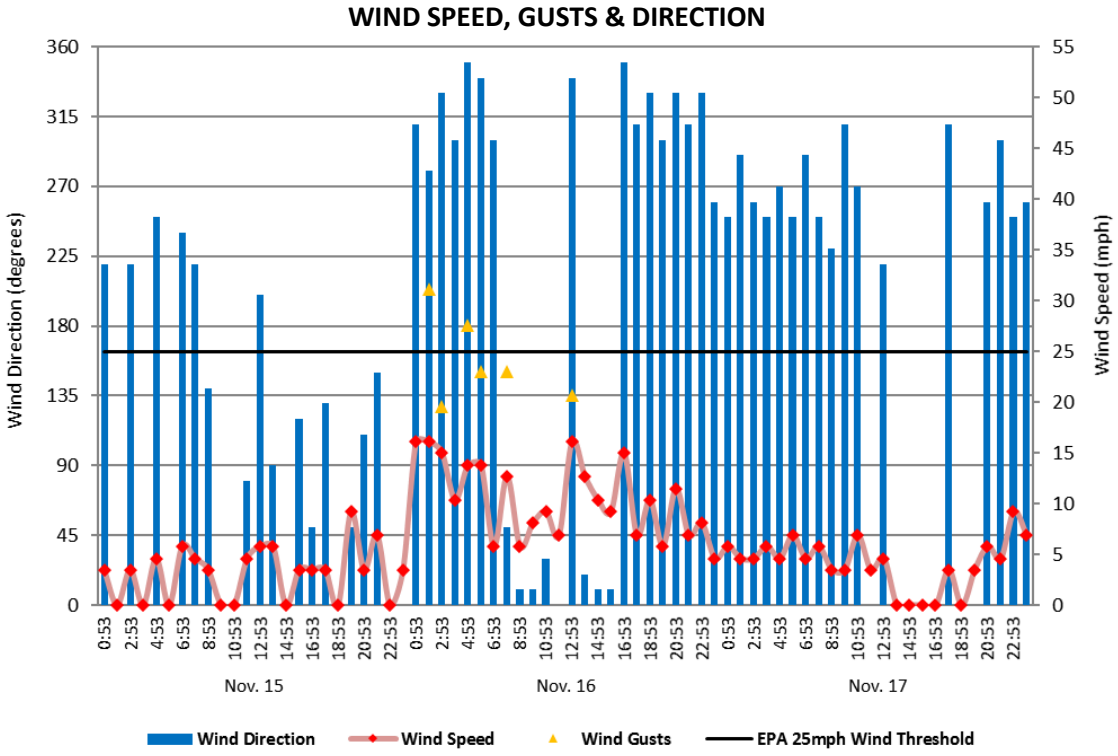


FIGURES B-18 & B-19
JACQUELINE COCHRAN AIRPORT (KTRM) WIND ROSES – NOVEBER 15 & 16

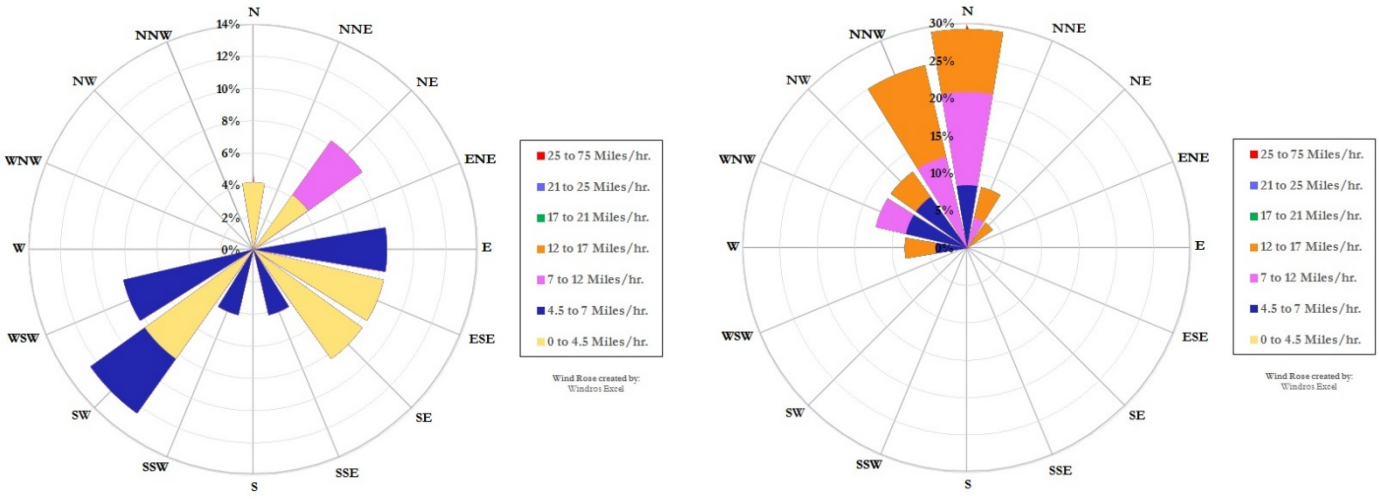


Figs. B-17 through B-19: KTRM meteorological data from the University of Utah's MesoWest system. November 15 wind rose (left) to November 16 (right rose).

FIGURE B-20
PALM SPRINGS AIRPORT (KPSP)

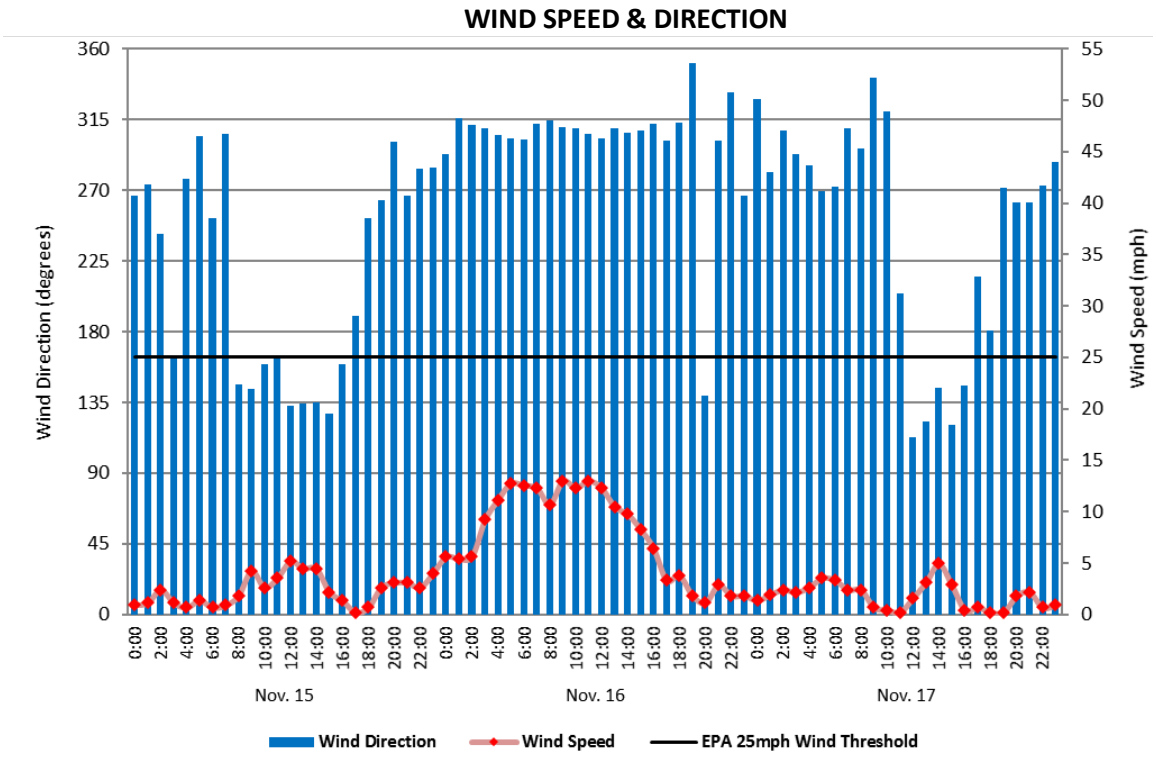


FIGURES B-21 & B-22
PALM SPRINGS AIRPORT (KPSP) WIND ROSES – NOVEBER 15 & 16

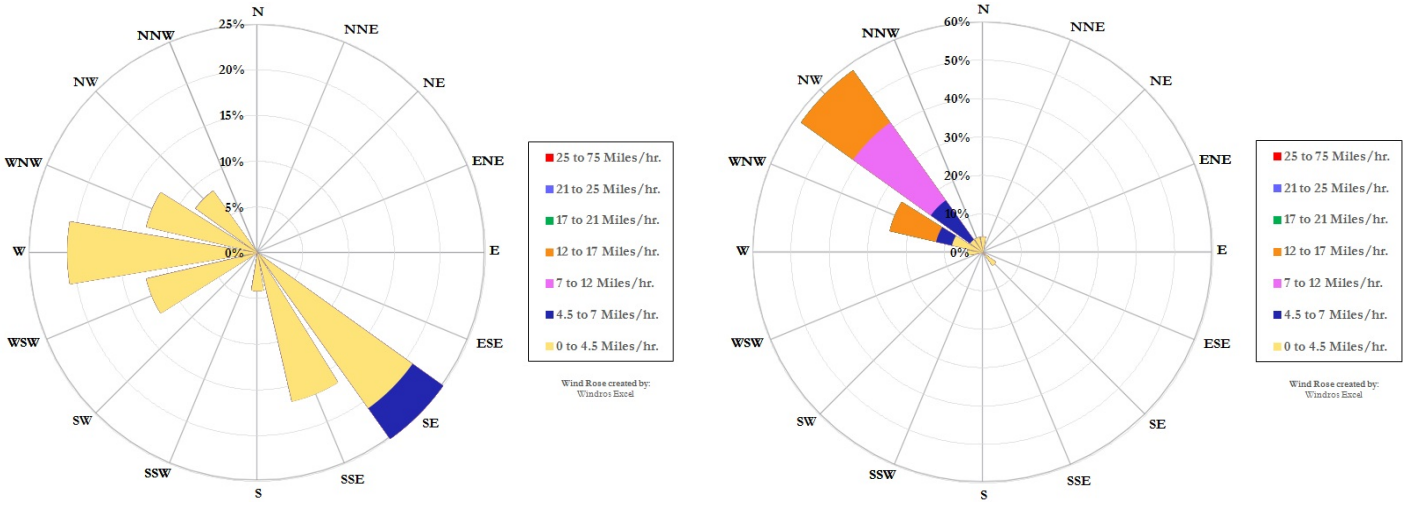


Figs. B-21 through B-22: KPSP meteorological data from the University of Utah's MesoWest system. November 15 wind rose (left) to November 16 (right rose).

FIGURE 23
TORRES MARTINEZ DESERT CAHUILLA RESERVATION



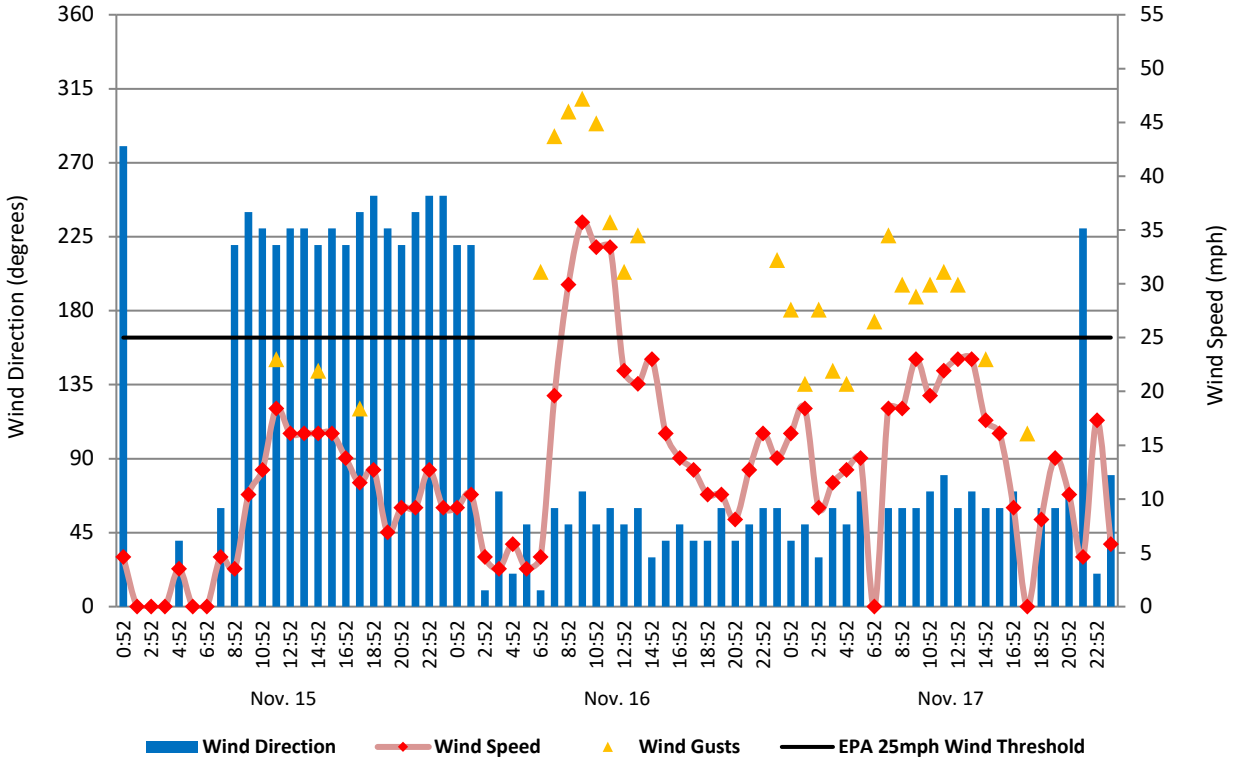
FIGURES B-24 & B-25
WIND ROSES – NOVEBER 15 & 16



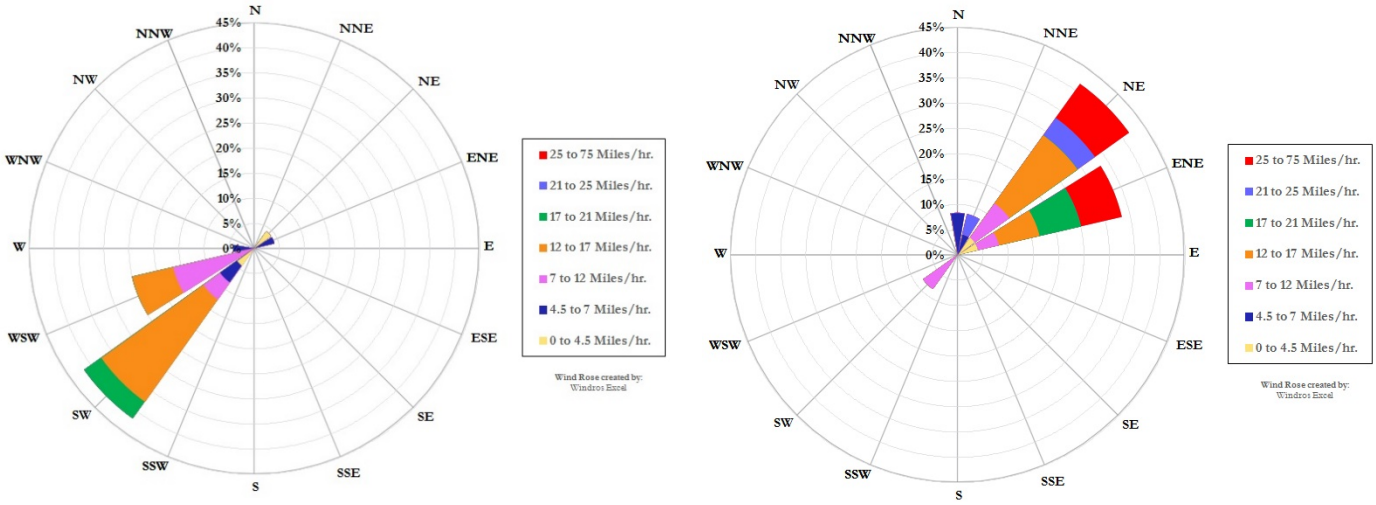
Figs. B-23 through B-25: Torres Martinez Desert Cahuilla Indian Reservation meteorological data shows a distinct shift in wind direction from November 15 (left rose) to November 16 (right rose). Wind data from the EPA's AQS data bank.

SOUTHERN SAN DIEGO COUNTY

FIGURE B-26
CAMPO AIRPORT (KCZZ)
WIND SPEED, GUSTS & DIRECTION



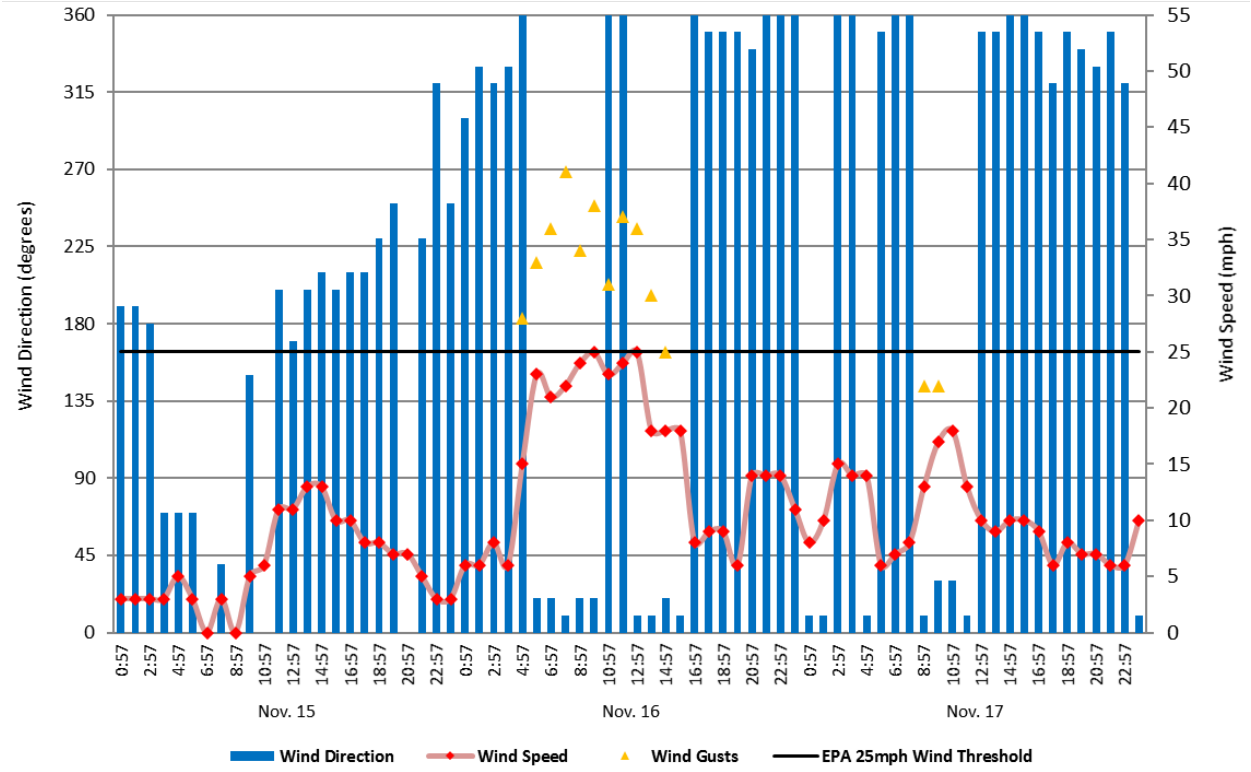
FIGURES B-27 & B-28
WIND ROSES – NOVEBER 15 & 16



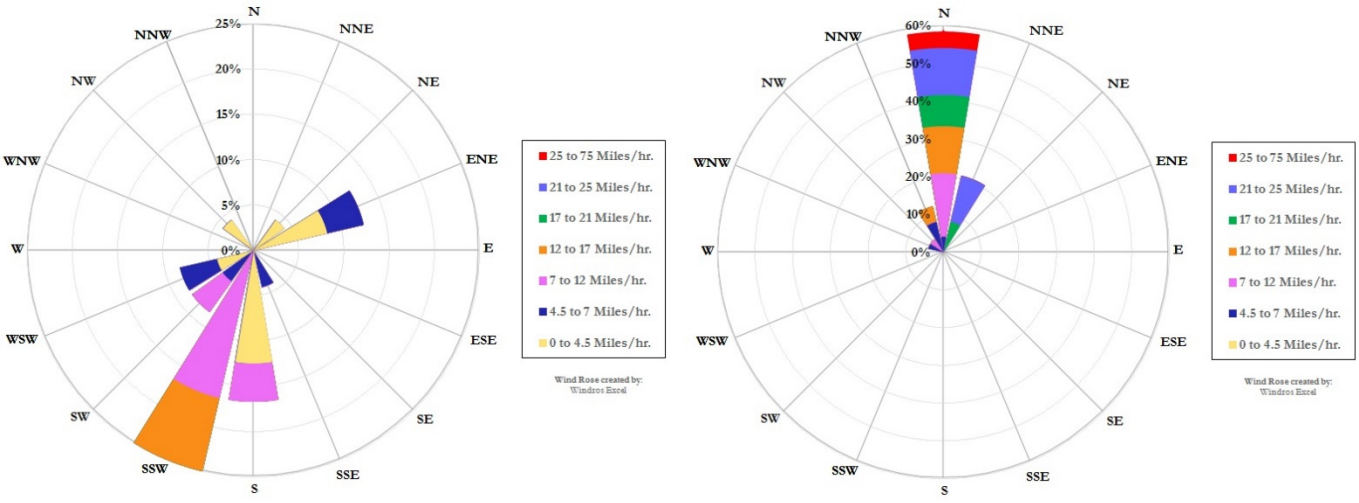
Figs. B-26 through B-28: KCZZ meteorological data from the University of Utah's MesoWest system. November 15 wind rose (left) to November 16 (right rose).

SOUTHWESTERN ARIZONA

FIGURE B-29
YUMA MCAS ARIZONA
WIND SPEED, GUSTS & DIRECTION



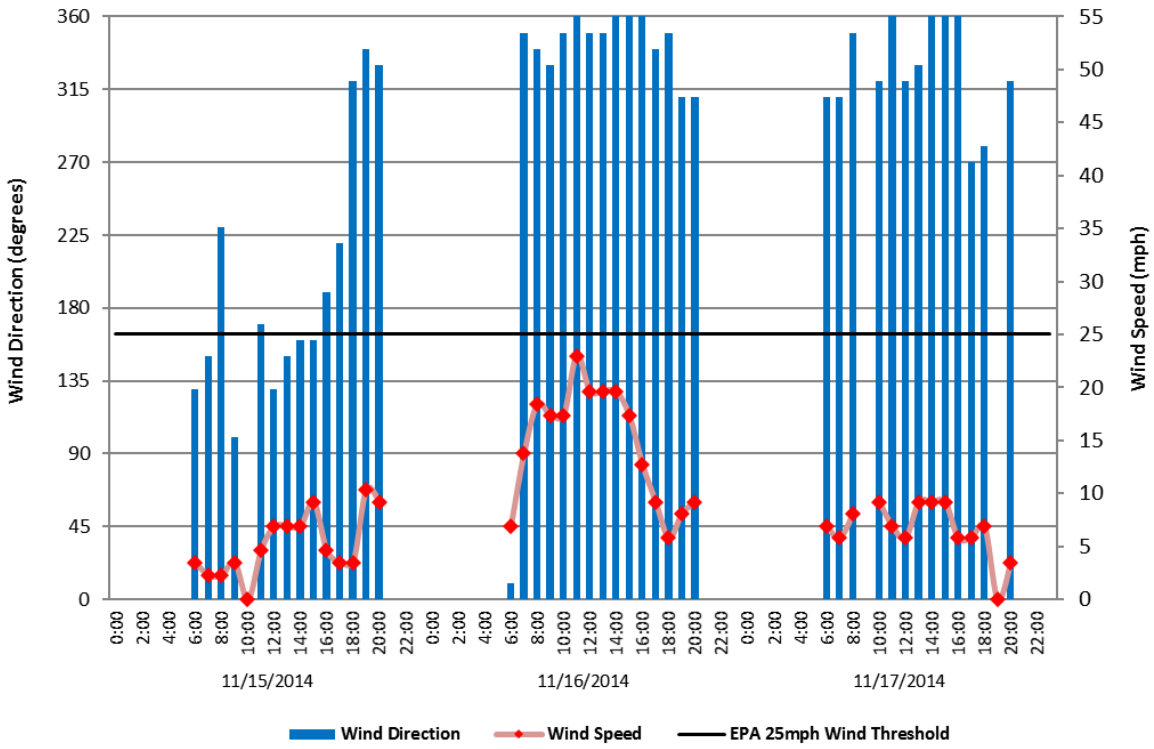
FIGURES B-30 & B-31
WIND ROSES – NOVEBER 15 & 16



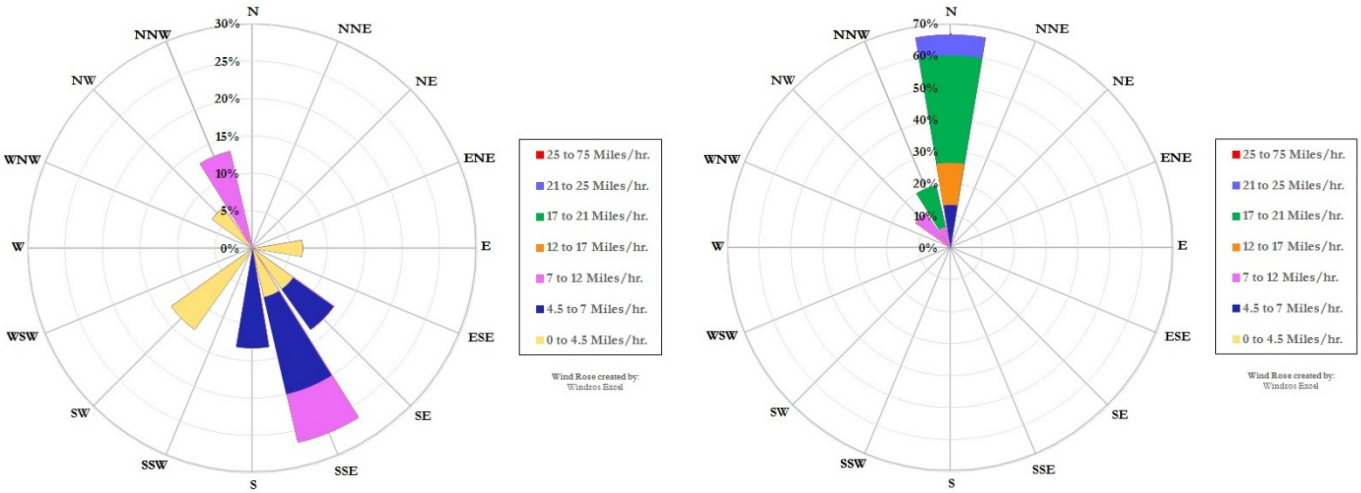
Figs. B-29 through B-31: KNYL meteorological data from the University of Utah's MesoWest system. November 15 wind rose (left) to November 16 (right rose).

MEXICO

FIGURE B-29
MEXICALI INTERNATIONAL AIRPORT (MMML)
WIND SPEED & DIRECTION



FIGURES B-30 & B-31
WIND ROSES – NOVEBER 15 & 16

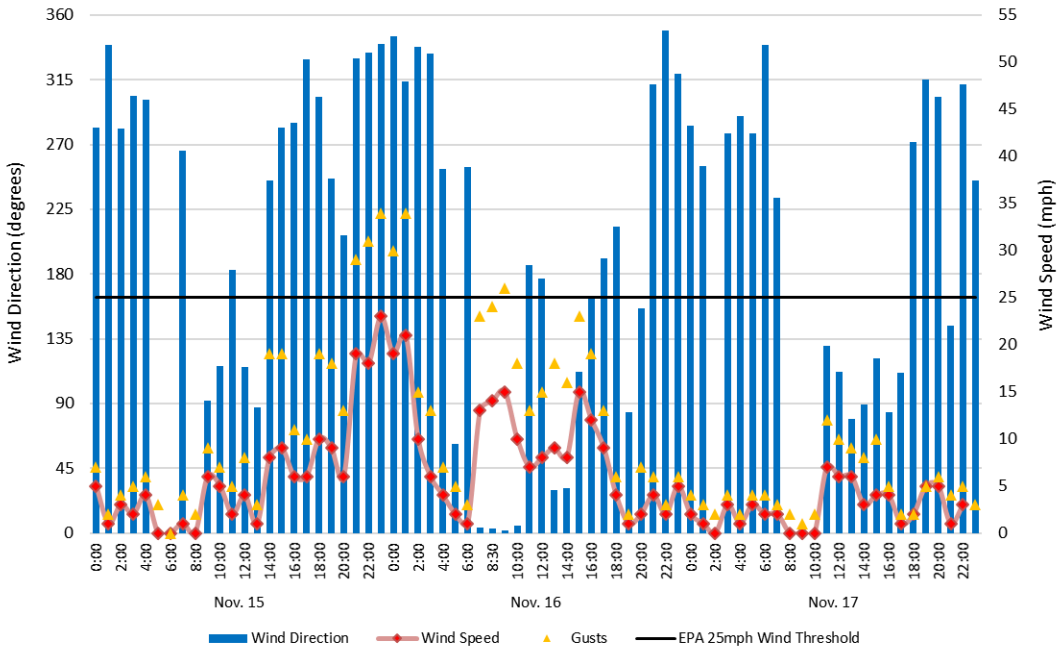


Figs. B-29 through B-31: MMML meteorological data from the University of Utah's MesoWest system. November 15 wind rose (left) to November 16 (right rose).

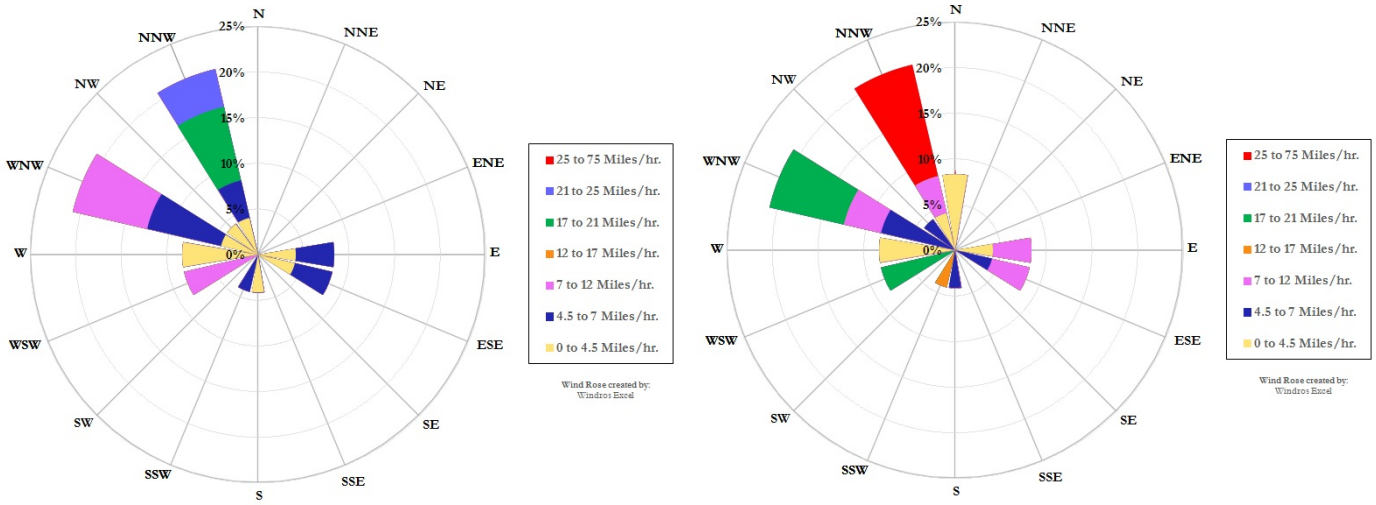
UPSTREAM WIND SITES – NOVEMBER 15

The following sites measured elevated winds or gusts that entrained dust on November 15 which remained suspended going into November 16.

FIGURE B-32
BORREGO SPRINGS
WIND SPEED, GUSTS & DIRECTION

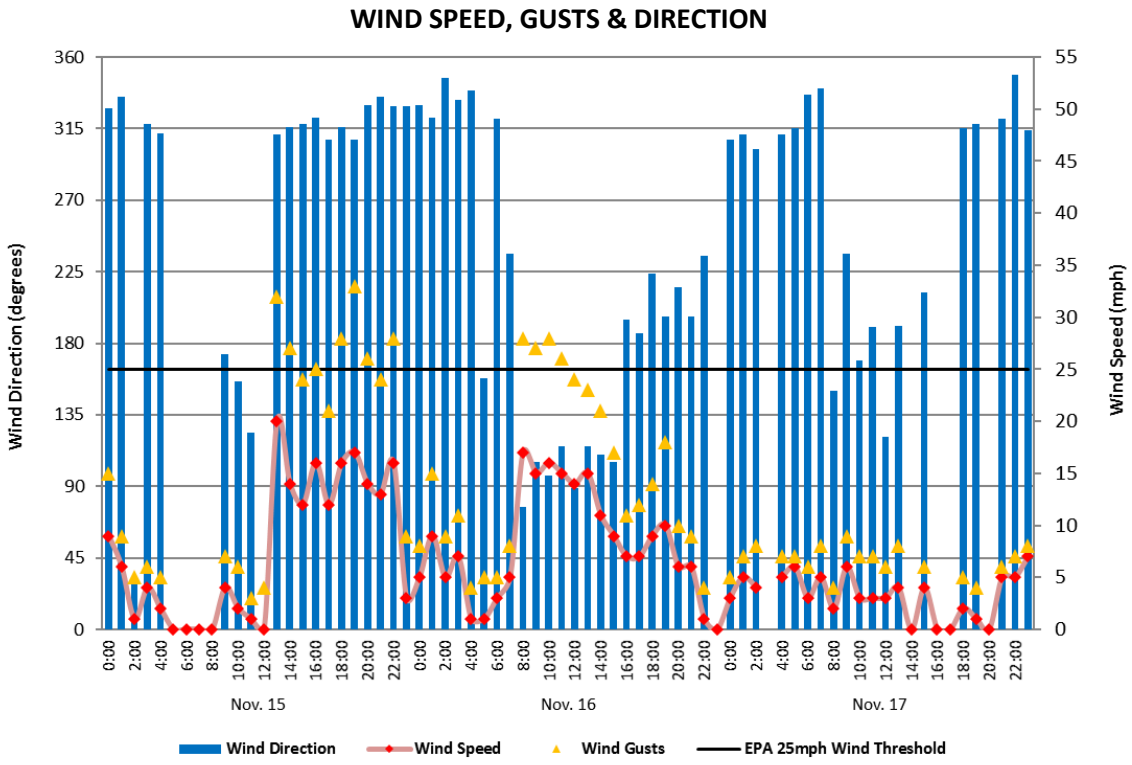


FIGURES B-33 & B-34
WIND ROSES – NOVEBER 15

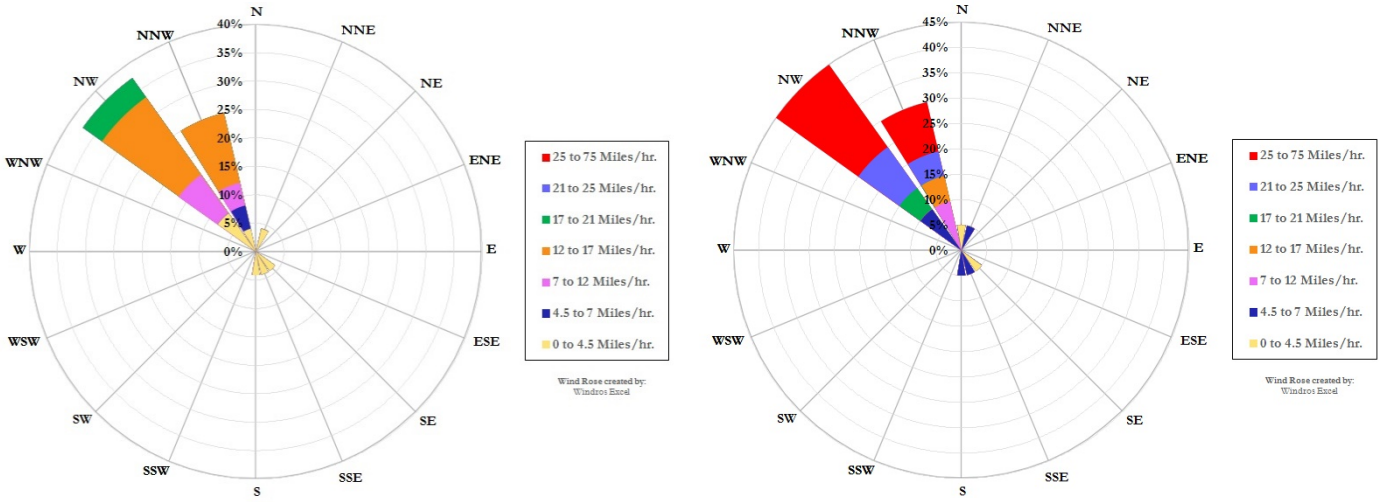


Figs. B-32 through B-34: Borrego Springs (Station ID: BRGSD) meteorological data from the University of Utah's MesoWest system. Left rose is for winds. Right rose is for gusts.

FIGURE B-35
OCOTILLO WELLS

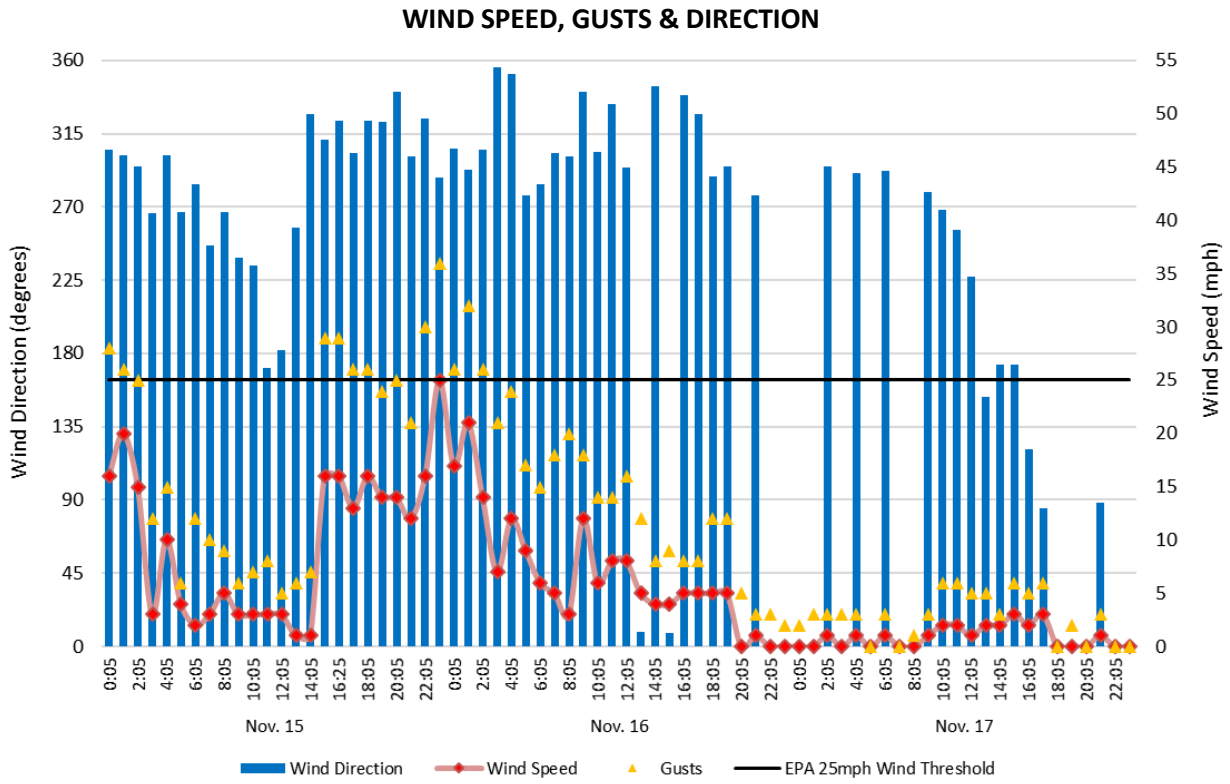


FIGURES B-36 & B-37
WIND ROSES – NOVEBER 15

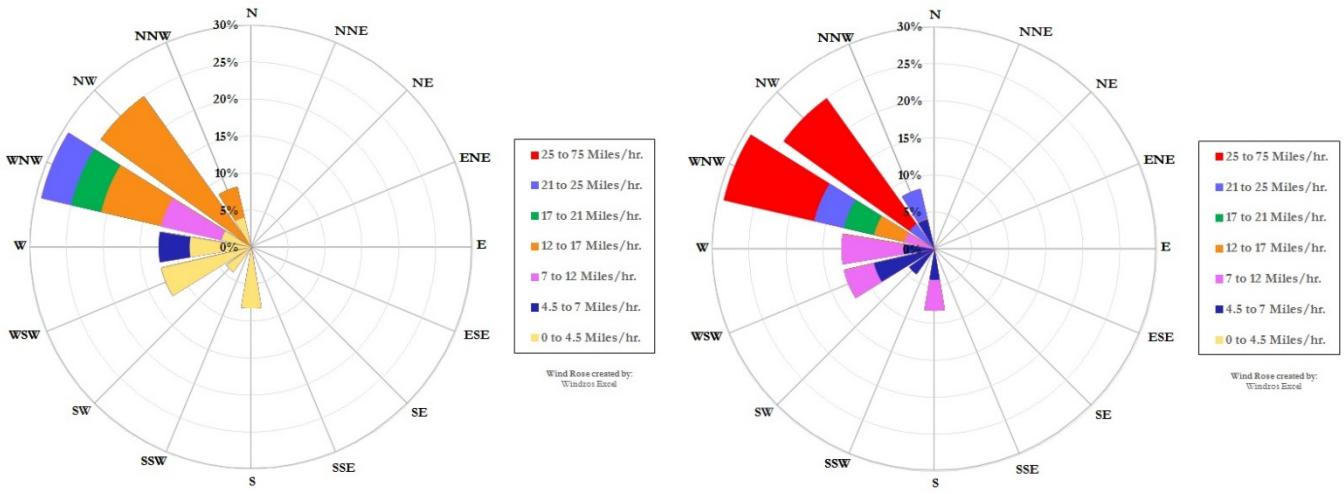


Figs. B-35 through B-37: Ocotillo Wells (Station ID: AS398/KD6RSQ5) meteorological data from the University of Utah's MesoWest system. Left rose is for winds. Right rose is for gusts.

FIGURE B-38
THOUSAND PALMS



FIGURES B-39 & B-40
WIND ROSES – NOVEBER 15

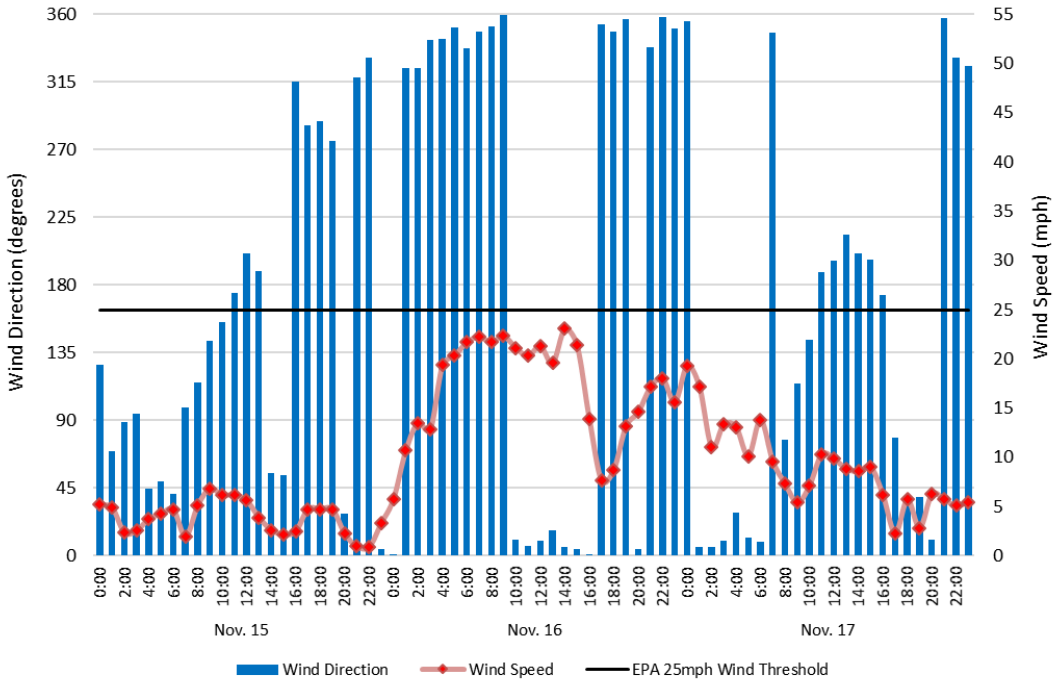


Figs. B-38 through B-40: Thousand Palms (Station ID: C2285) meteorological data from the University of Utah's MesoWest system. Left rose is for winds. Right rose is for gusts.

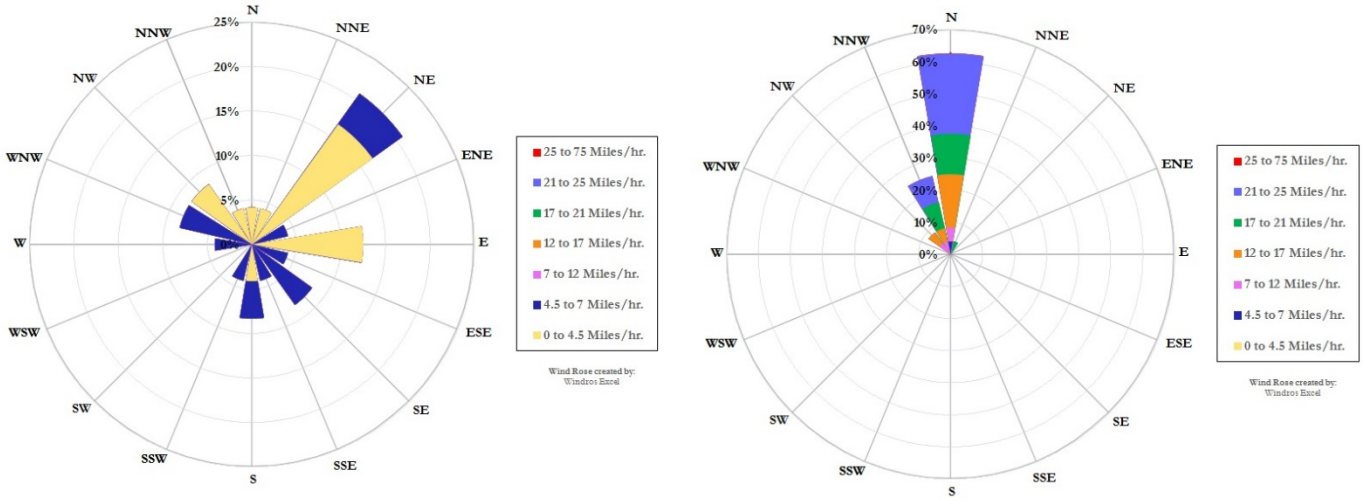
UPSTREAM WIND SITES – NOVEMBER 16

The following sites measured elevated winds or gusts that entrained dust on November 16 and transported it downstream to Niland and Brawley. Some sites like KNXP measured elevated northerly winds and gusts late on November 15.

FIGURE B-41
BOMBAY BEACH
WIND SPEED & DIRECTION

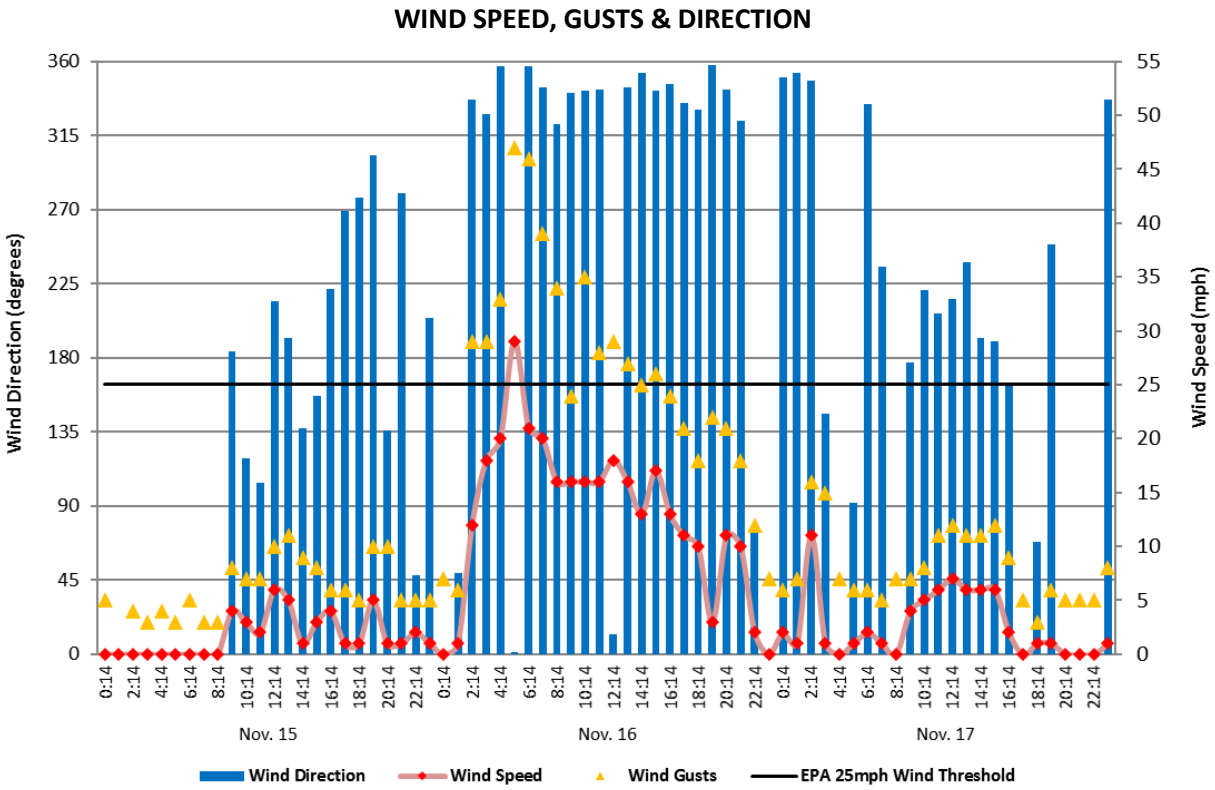


FIGURES B-42 & B-43
WIND ROSES – NOVEBER 15 & 16

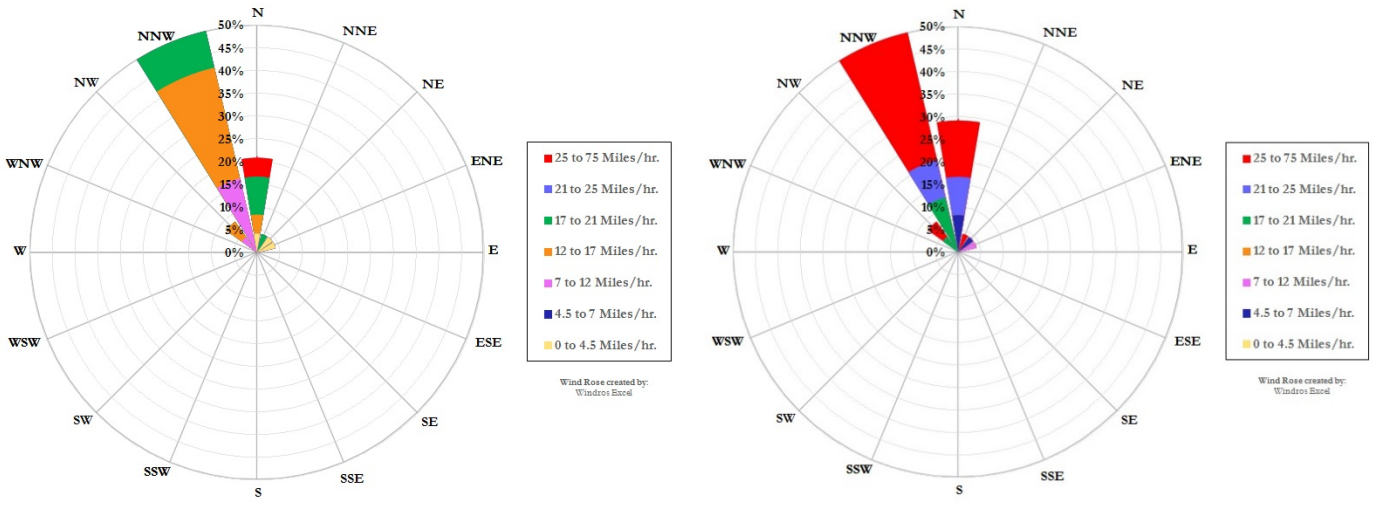


Figs. B-41 through B-43: Bombay Beach meteorological data from AQMIS2. Left rose is for November 15. Right rose is for November 16.

FIGURE B-44
DOS PALMAS

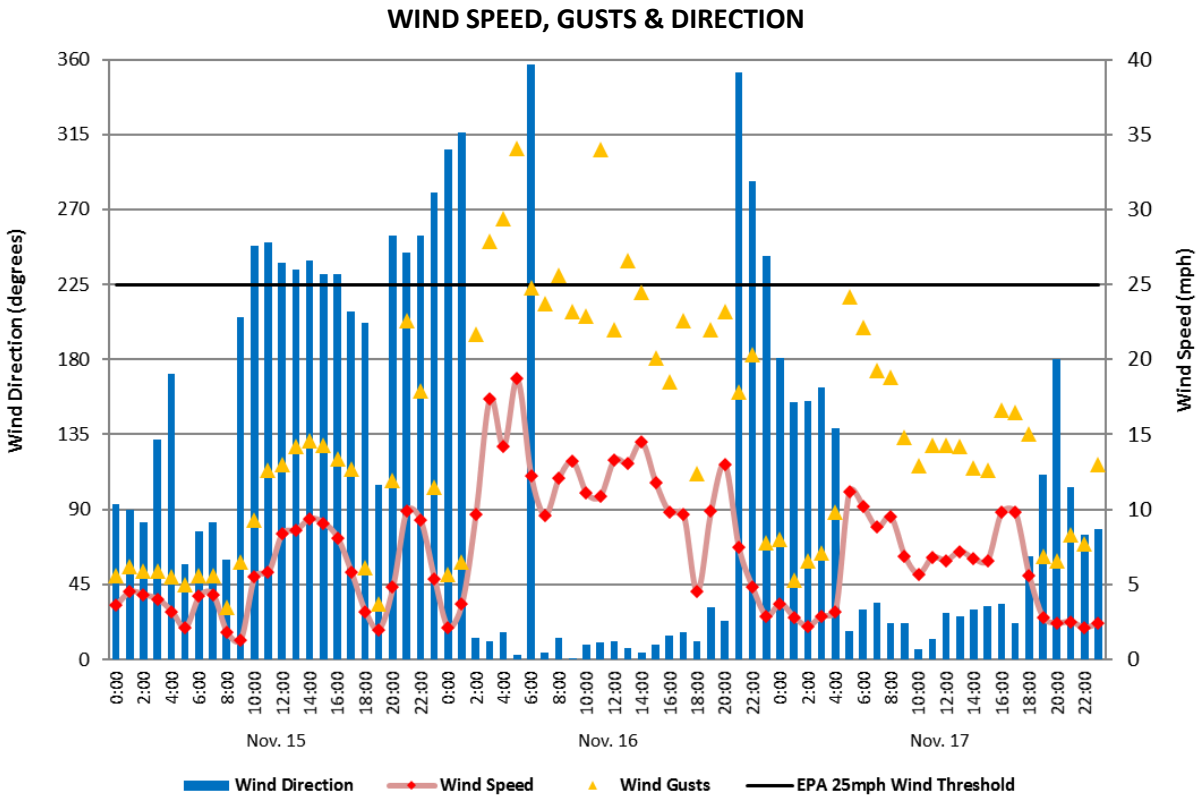


FIGURES B-45 & B-46
WIND ROSES – NOVEBER 16

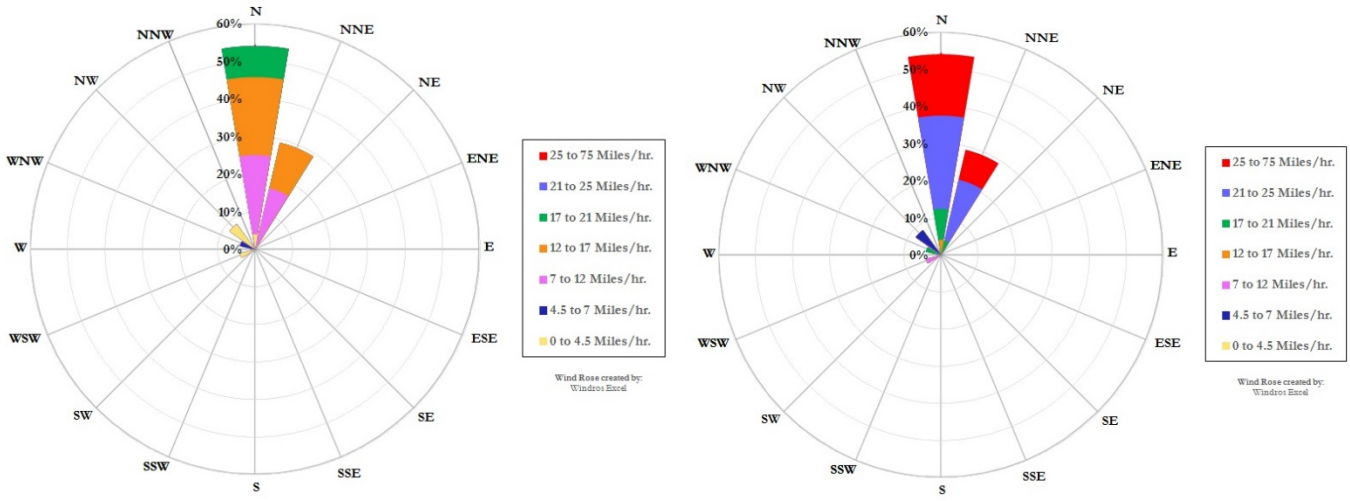


Figs. B-44 through B-46: Dos Palmas meteorological data from the University of Utah's Mesowest system (Station ID: DPMC1). Left rose is for winds. Right rose is for gusts.

FIGURE B-47
ESSEX

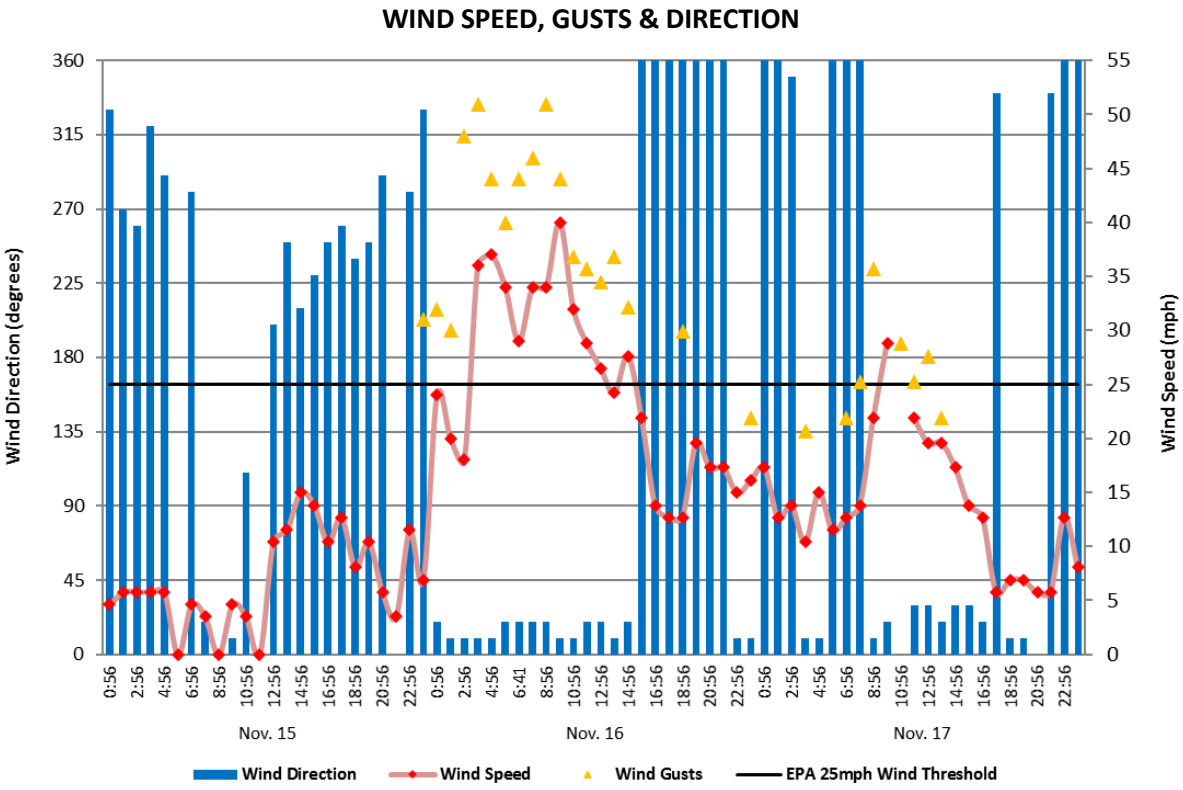


FIGURES B-48 & B-49
WIND ROSES – NOVEBER 16

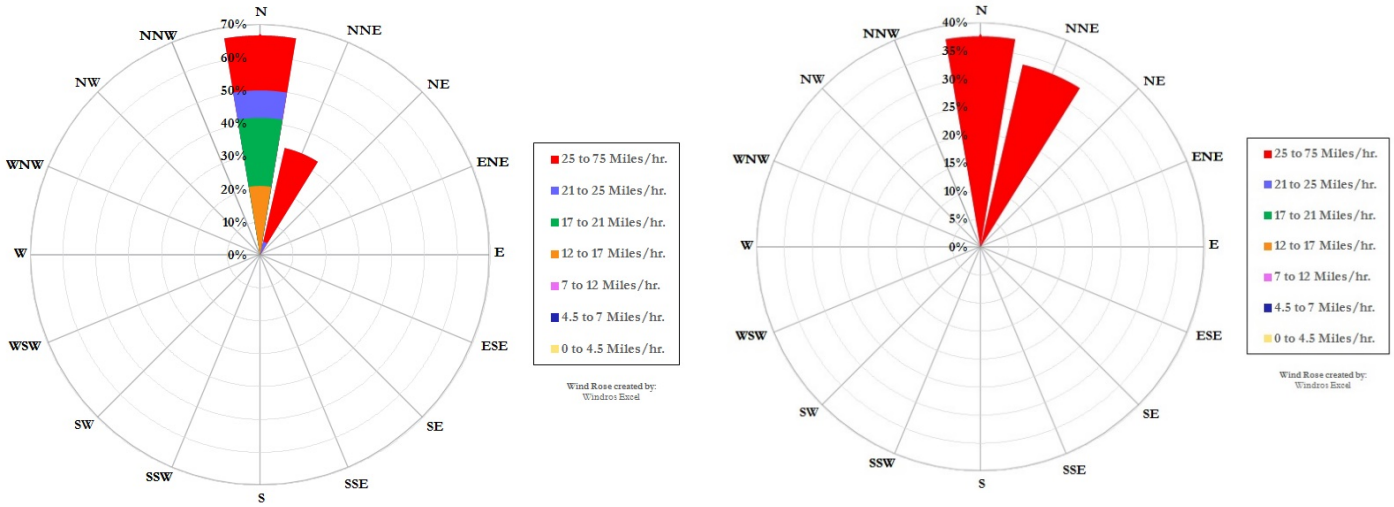


Figs. B-47 through B-49: Essex meteorological data from the University of Utah's Mesowest system (Station ID: EXCC1). Left rose is for winds. Right rose is for gusts.

FIGURE B-50
NEEDLES AIRPORT (KEED)

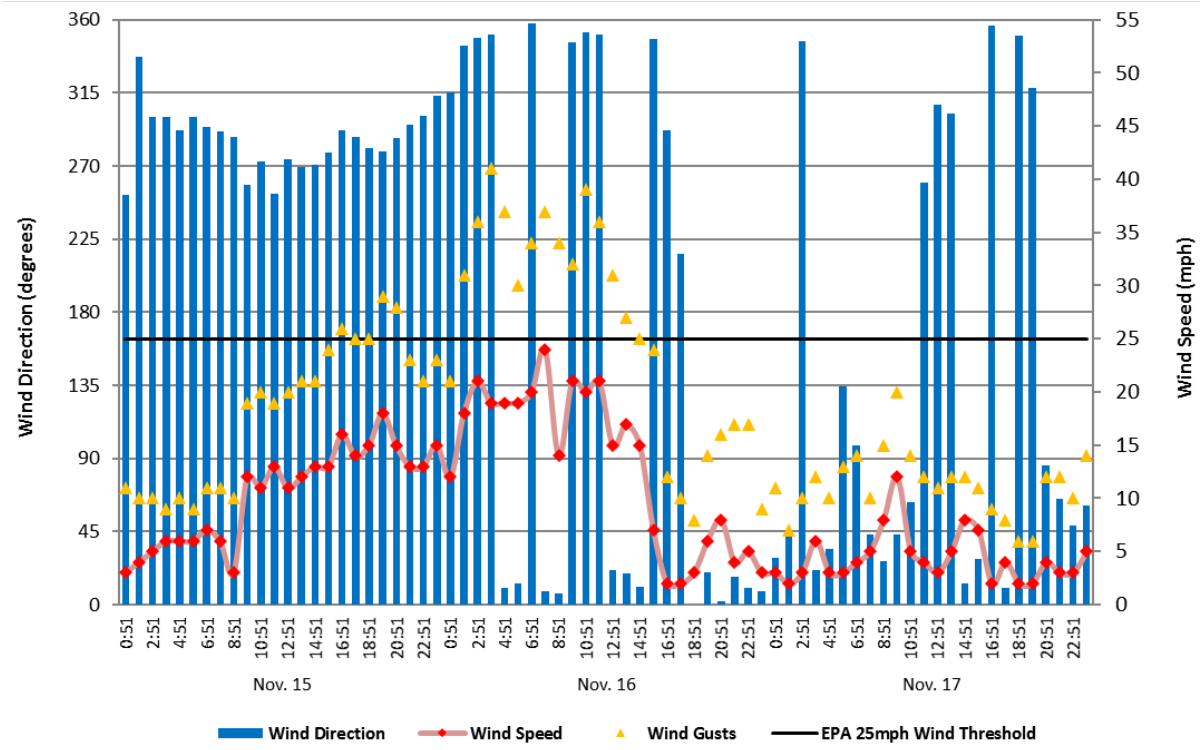


FIGURES B-51 & B-52
WIND ROSES – NOVEBER 16

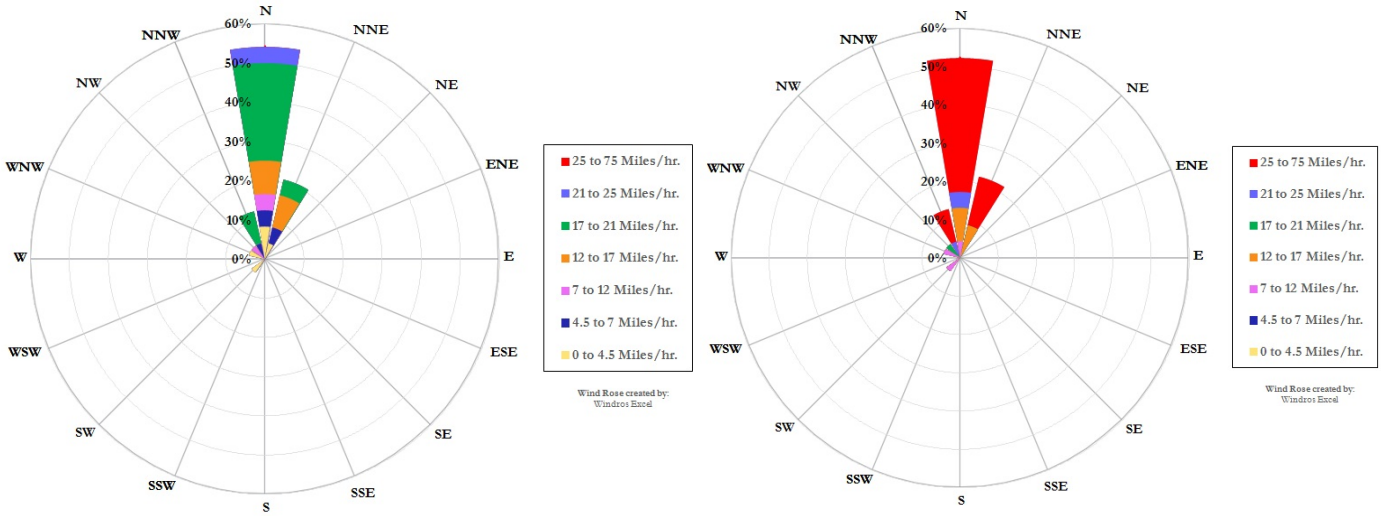


Figs. B-50 through B-52: Needles Airport meteorological data from the University of Utah's Mesowest system (Station ID: KEED). Left rose is for winds. Right rose is for gusts.

FIGURE B-53
MID HILLS CAMPGROUND
WIND SPEED, GUSTS & DIRECTION

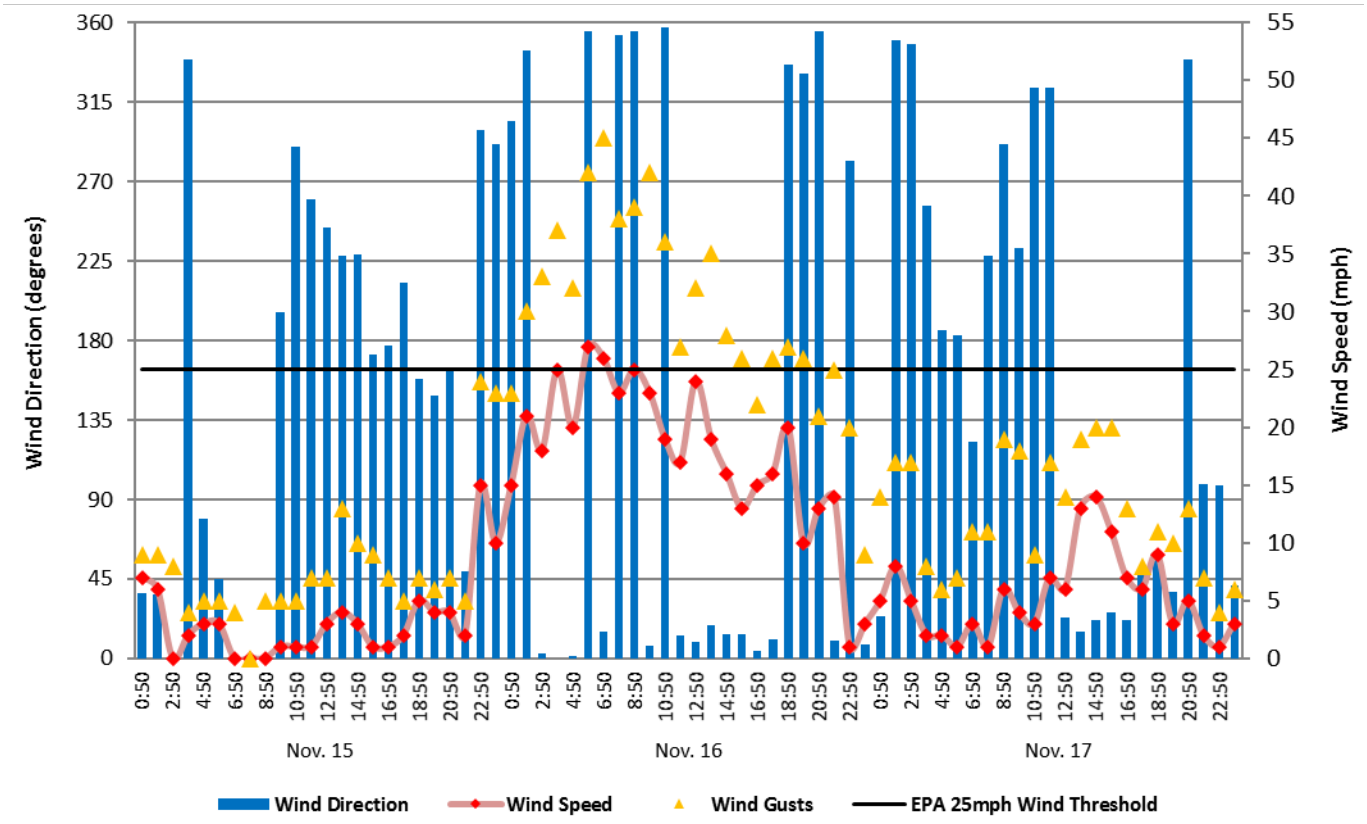


FIGURES B-54 & B-55
WIND ROSES – NOVEBER 16

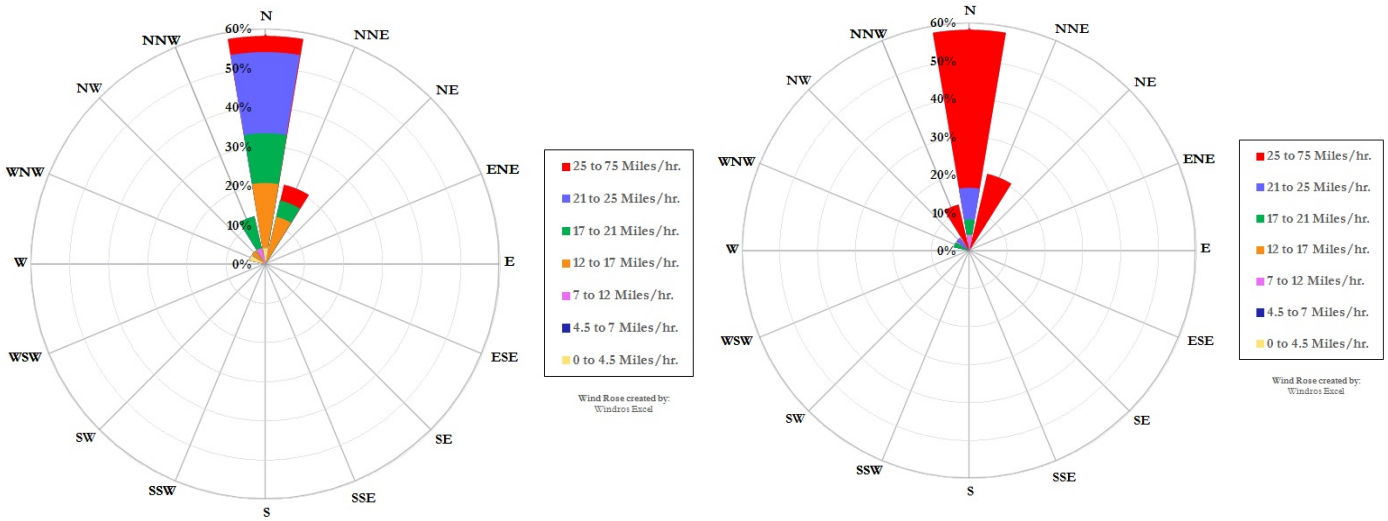


Figs. B-53 through B-55: Mid Hills Campground meteorological data from the University of Utah's Mesowest system (Station ID: MDHC1). Left rose is for winds. Right rose is for gusts.

FIGURE B-56
RICE VALLEY
WIND SPEED, GUSTS & DIRECTION

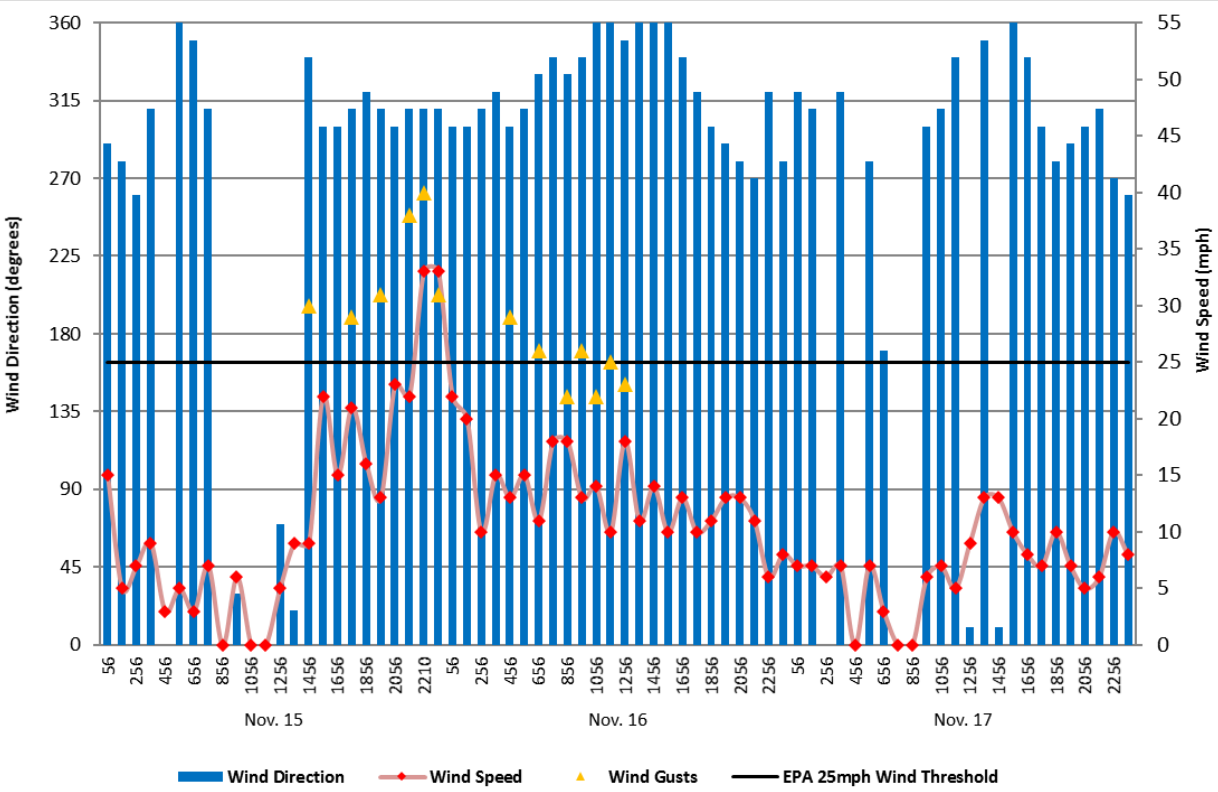


FIGURES B-57 & B-58
WIND ROSES – NOVEBER 16

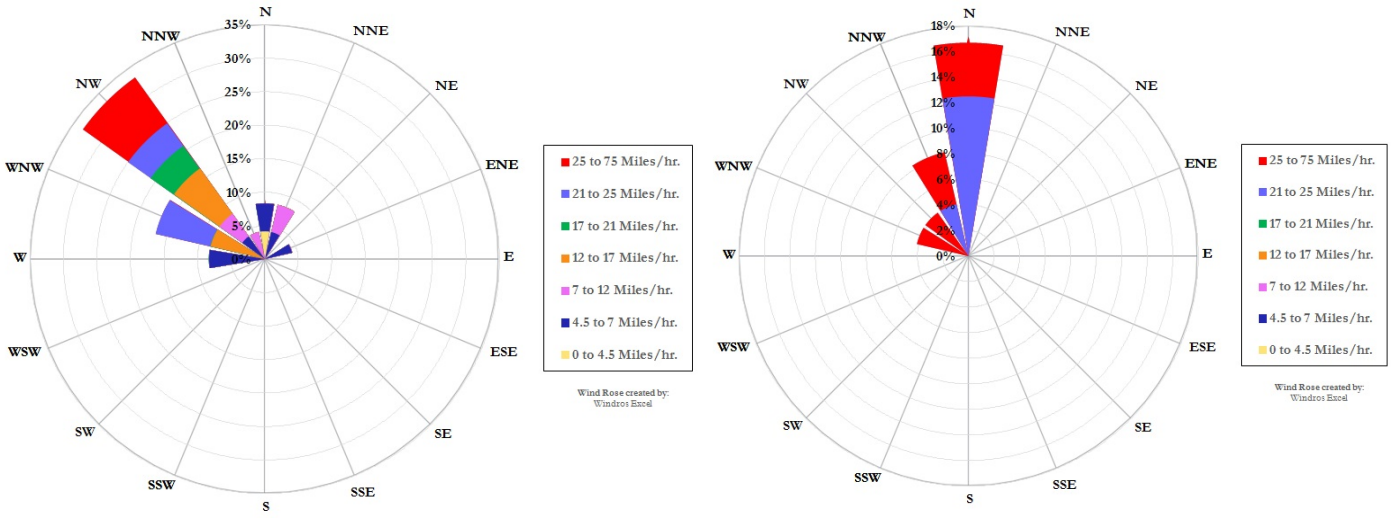


Figs. B-57 through B-58: Rice Valley meteorological data from the University of Utah's Mesowest system (Station ID: RVYC1). Left rose is for winds. Right rose is for gusts.

FIGURE B-59
TWENTYNINE PALMS AIRFIELD (KNXP)
WIND SPEED, GUSTS & DIRECTION

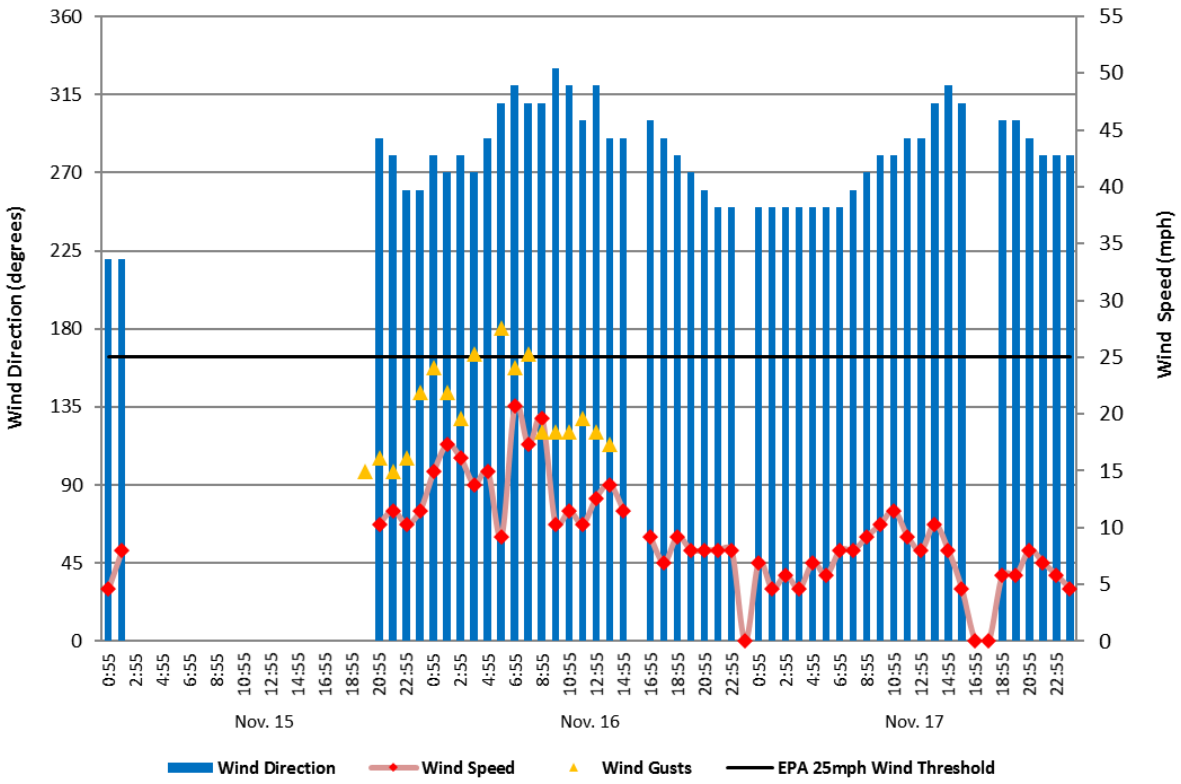


FIGURES B-60 & B-61
WIND ROSES – NOVEBER 16

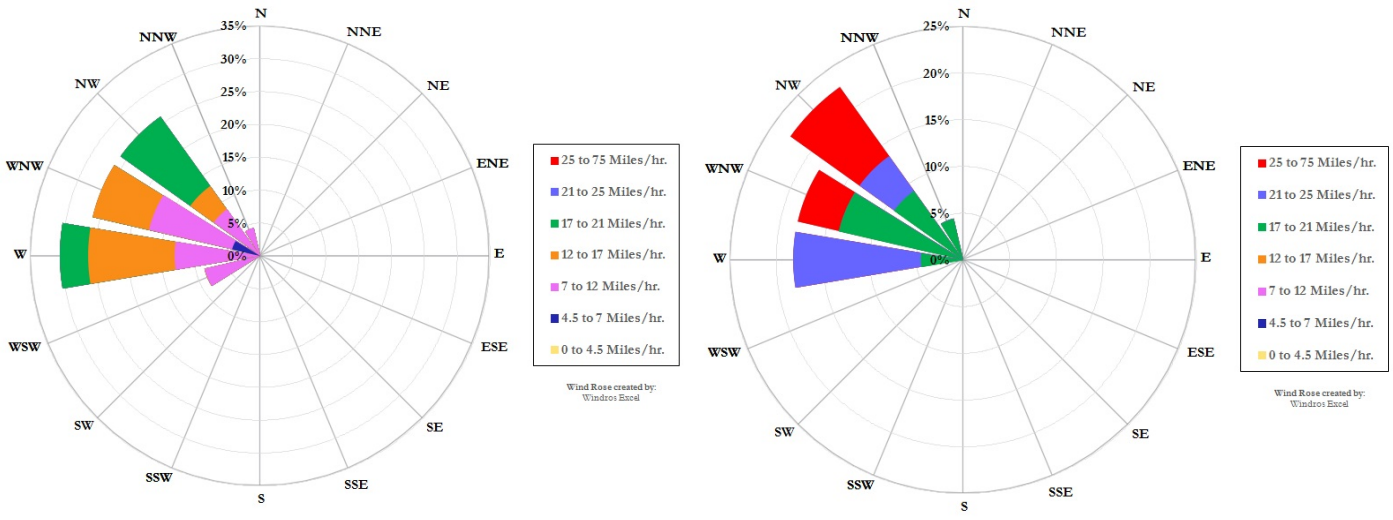


Figs. B-59 through B-61: Twentynine Palms Expeditionary Arifield meteorological data from the NCEI's QCLCD system (Station ID: KNXP). Left rose is for November 15 (winds). Right rose is for November 16 (gusts).

FIGURE B-62
TWENTYNINE PALMS AIRPORT (KNTP)
WIND SPEED, GUSTS & DIRECTION

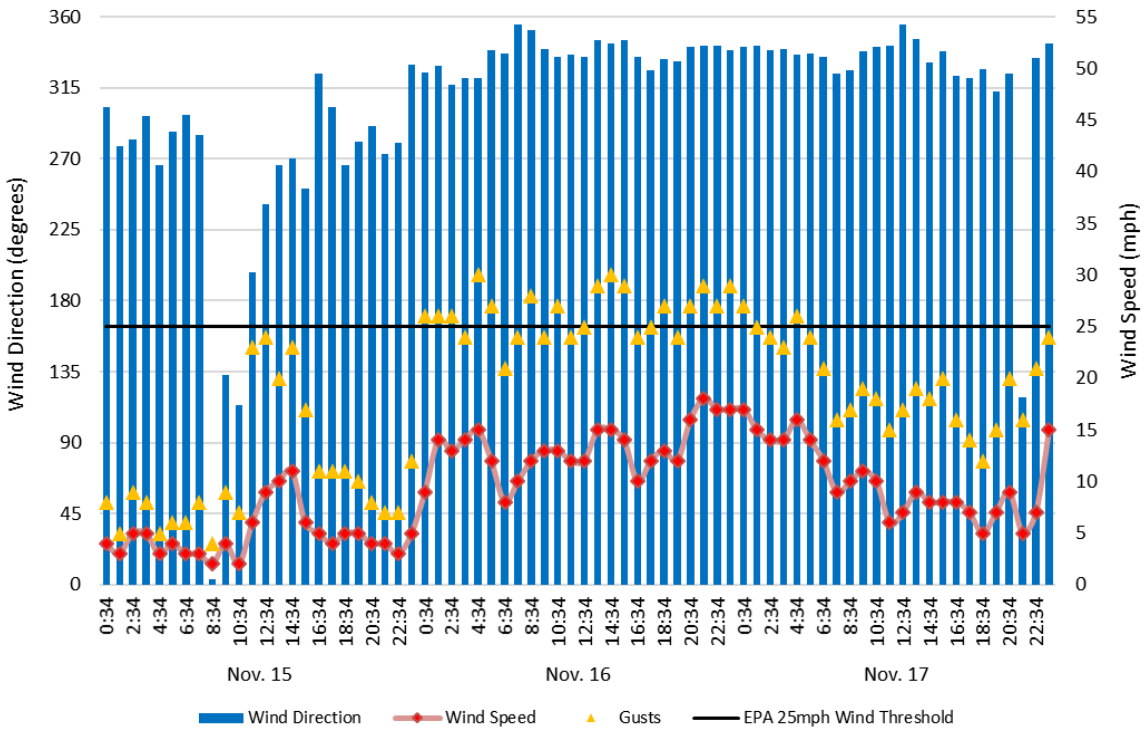


FIGURES B-63 & B-64
WIND ROSES – NOVEBER 16

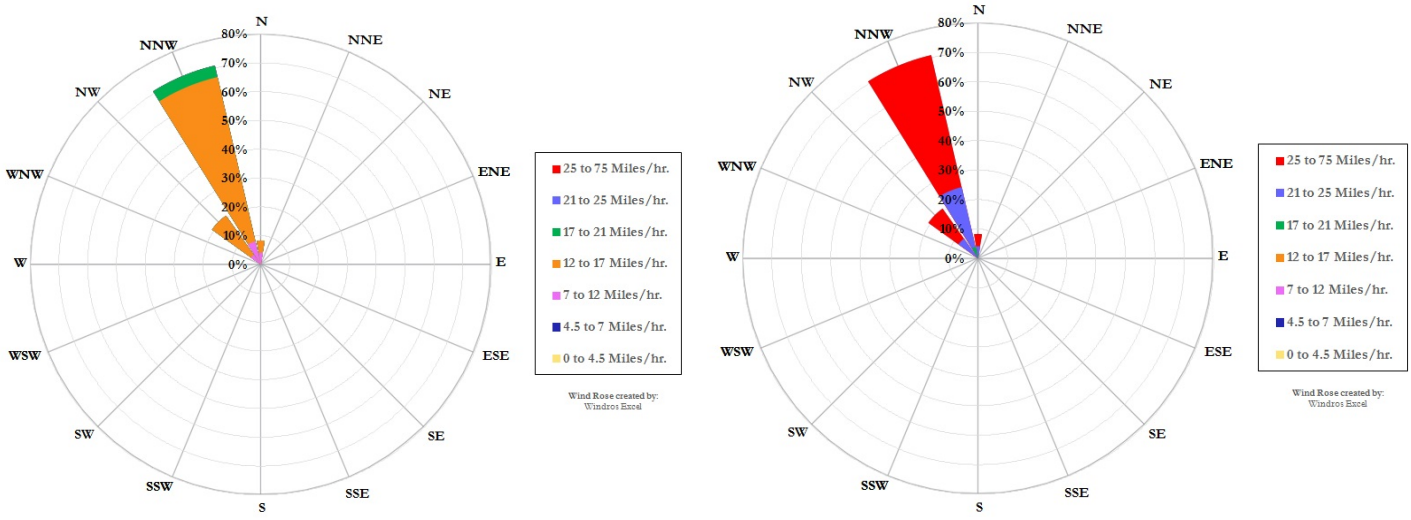


Figs. B-62 through B-64: Twentynine Palms Airport meteorological data from the University of Utah's MesoWest system (Station ID: KNTP). Left rose is for winds. Right rose is for gusts.

FIGURE B-65
WILSON CANYON
WIND SPEED, GUSTS & DIRECTION



FIGURES B-66 & B-67
WIND ROSES – NOVEBER 16



Figs. B-65 through B-67: Wilson Canyon meteorological data from the University of Utah's MesoWest system (Station ID: WCYC1). Left rose is for winds. Right rose is for gusts.

FIGURE B-68

BLYTHE AIRPORT QCLCD— NOVEMBER 16

QUALITY CONTROLLED Local Climatological Data: BLYTHE AIRPORT

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final)
HOURLY OBSERVATIONS TABLE
BLYTHE AIRPORT (23158)
BLYTHE, CA
(11/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 395 ft. above sea level
Latitude: 33.618
Longitude: -114.714
Data Version: VER3

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp (F)	Dry Bulb Temp (C)	Wet Bulb Temp (F)	Wet Bulb Temp (C)	Dew Point Temp (F)	Dew Point Temp (C)	Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
16	0052	12	CLR	10.00		64	17.8	50	10.1	36	2.2	36	9	350	17	29.48			29.88	AA		29.90
16	0152	12	CLR	10.00		66	18.9	51	10.6	36	2.2	33	24	330	32	29.49			29.90	AA		29.91
16	0252	12	CLR	8.00		65	18.3	50	10.2	35	1.7	33	28	350	34	29.55			29.96	AA		29.97
16	0352	12	CLR	8.00		63	17.2	48	8.6	29	-1.7	28	26	360	34	29.61			30.01	AA		30.03
16	0422	12	BKN011	2.00	HZ	63	17.2	47	8.1	26	-3.3	25	25	360	40	29.62			M	SP		30.04
16	0441	12	OVC009	1.50	HZ	62	16.7	46	7.7	25	-3.9	24	28	360	40	29.63			M	SP		30.05
16	0449	12	VV009	1.00		63	17.0	46	7.9	25	-4.0	24	34	360	46	29.64			M	SP		30.06
16	0452	12	VV008	1.00		62	16.7	46	7.5	24	-4.4	23	34	360	46	29.64			30.04	AA		30.06
16	0502	12	BKN008	2.00	HZ	62	16.7	45	7.4	23	-5.0	22	29	360	40	29.64			M	SP		30.06
16	0522	12	BKN011	2.00	HZ	60	15.6	44	6.7	22	-5.6	23	31	360	39	29.67			M	SP		30.09
16	0531	12	BKN011	1.75	HZ	59	15.0	44	6.4	22	-5.6	24	30	360	40	29.67			M	SP		30.09
16	0549	12	BKN010	3.00	HZ	57	14.0	42	5.7	21	-6.0	25	24	350		29.69			M	SP		30.11
16	0552	12	SCT010	5.00	HZ	58	14.4	43	6.0	21	-6.1	24	22	350	32	29.70			30.11	AA		30.12
16	0609	12	FEW011	1.25	HZ	58	14.4	42	5.6	18	-7.8	21	38	360	45	29.70			M	SP		30.12
16	0611	12	VV009	0.50		58	14.4	42	5.6	18	-7.8	21	43	360	51	29.70			M	SP		30.12
16	0628	12	VV010	0.50		58	14.4	41	5.2	15	-9.4	18	31	350	47	29.73			M	SP		30.15
16	0634	12	SCT010	1.25		57	13.9	41	4.9	15	-9.4	19	32	350	44	29.73			M	SP		30.15
16	0636	12	SCT010	2.00	HZ	57	13.9	41	4.9	15	-9.4	19	30	350	39	29.73			M	SP		30.15
16	0650	12	FEW012	3.00	HZ	57	14.0	40	4.6	12	-11.0	17	33	360	38	29.75			M	SP		30.17
16	0652	12	FEW012	3.00	HZ	58	14.4	41	5.0	13	-10.6	17	28	360	38	29.76			30.16	AA		30.18
16	0718	12	FEW015	1.75	HZ	58	14.4	40	4.5	8	-13.3	13	36	340	41	29.75			M	SP		30.17
16	0720	12	VV011	1.00	HZ	58	14.4	40	4.4	7	-13.9	13	33	340	41	29.75			M	SP		30.17
16	0723	12	VV009	0.75		58	14.4	40	4.4	7	-13.9	13	33	340	41	29.75			M	SP		30.17
16	0738	12	BKN009	1.75	HZ	58	14.4	41	5.0	13	-10.6	17	28	340	38	29.77			M	SP		30.19
16	0741	12	BKN009	3.00	HZ	59	15.0	42	5.4	14	-10.0	17	24	340	36	29.78			M	SP		30.20
16	0748	12	SCT009	8.00		59	15.0	42	5.4	14	-10.0	17	22	340	31	29.78			M	SP		30.20
16	0752	12	SCT008	8.00		59	15.0	42	5.4	14	-10.0	17	23	360	31	29.78			30.19	AA		30.20
16	0832	12	FEW012	1.75	HZ	59	15.0	41	4.9	9	-12.8	14	32	360	41	29.79			M	SP		30.21
16	0840	12	BKN012	1.25	HZ	59	15.0	41	5.0	10	-12.2	14	28	350	39	29.80			M	SP		30.22
16	0847	12	BKN014	1.75	HZ	59	15.0	41	5.0	10	-12.0	14	29	350	36	29.81			M	SP		30.23
16	0850	12	BKN016	2.00	HZ	59	15.0	41	5.0	10	-12.0	14	25	360	36	29.82			M	SP		30.24
16	0852	12	BKN018	2.00	HZ	59	15.0	41	5.0	10	-12.2	14	22	350	36	29.82			30.23	AA		30.24
16	0929	12	OVC017	1.50	HZ	60	15.6	41	5.1	8	-13.3	12	29	360	38	29.82			M	SP		30.24
16	0942	12	FEW008 OVC015	1.00	HZ	60	15.6	41	5.0	7	-13.9	12	33	350	40	29.81			M	SP		30.23
16	0950	12	FEW008 OVC013	1.50	HZ	61	16.0	42	5.3	7	-14.0	11	31	360	40	29.81			M	SP		30.23
16	0952	12	FEW008 OVC013	1.50	HZ	61	16.1	42	5.3	7	-13.9	11	31	360	39	29.81			30.22	AA		30.23
16	1004	12	OVC015	1.25	HZ	60	15.6	41	4.9	6	-14.4	11	33	360	41	29.81			M	SP		30.23
16	1015	12	VV014	1.00	HZ	61	16.1	41	5.2	6	-14.4	11	33	360	40	29.81			M	SP		30.23
16	1019	12	VV015	0.50	HZ	61	16.1	41	5.1	5	-15.0	10	34	360	43	29.82			M	SP		30.24
16	1052	12	VV017	0.50	HZ	62	16.7	42	5.2	2	-16.7	9	33	010	43	29.81			30.22	AA		30.23
16	1105	12	BKN018	1.50	HZ	63	17.2	42	5.5	2	-16.7	8	29	010	40	29.79			M	SP		30.21
16	1109	12	BKN018	3.00	HZ	63	17.2	42	5.5	2	-16.7	8	28	360	36	29.80			M	SP		30.22
16	1117	12	SCT024	7.00		63	17.2	42	5.7	5	-15.0	10	30	340	34	29.79			M	SP		30.21
16	1152	12	CLR	6.00	HZ	64	17.8	43	5.9	4	-15.6	9	24	330		29.78			30.19	AA		30.20
16	1252	12	CLR	10.00		65	18.3	43	6.2	4	-15.6	9	21	330	32	29.77			30.18	AA		30.19
16	1352	12	CLR	10.00		66	18.9	44	6.4	2	-16.7	8	22	340	32	29.76			30.16	AA		30.18
16	1452	12	CLR	10.00		65	18.3	43	5.9	-2	-18.9	7	22	360	30	29.75			30.16	AA		30.17
16	1552	12	CLR	10.00		63	17.2	42	5.3	-2	-18.9	7	20	360	28	29.75			30.16	AA		30.17
16	1652	12	CLR	10.00		59	15.0	40	4.2	-1	-18.3	8	15	010		29.76			30.16	AA		30.18
16	1752	12	CLR	10.00		57	13.9	38	3.5	-2	-18.9	9	16	360		29.77			30.18	AA		30.19
16	1852	12	CLR	10.00		58	14.4	39	3.8	-3	-19.4	8	15	360		29.78			30.19	AA		30.20
16	1952	12	CLR	10.00		57	13.9	38	3.5	-3	-19.4	8	14	340		29.79			30.20	AA		30.21
16	2052	12	CLR	10.00		56	13.3	38	3.2	-3	-19.4	9	17	350		29.80			30.21	AA		30.22
16	2152	12	CLR	10.00		55	12.8	37	2.9	-3	-19.4	9	16	330	20	29.83			30.24	AA		30.25
16	2252	12	CLR	10.00		53	11.7	36	2.3	-2	-18.9	10	13	040		29.83			30.24	AA		30.25
16	2352	12	CLR	10.00		54	12.2	37	2.6	-1	-18.3	10	14	330		29.83			30.24	AA		30.25

Dynamically generated Thu Dec 17 19:53:31 EST 2015 via http://www.ncdc.noaa.gov/qclcd/QCLCD

2/17/2017

QUALITY CONTROLLED Local Climatological Data: BLYTHE AIRPORT

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final)
HOURLY OBSERVATIONS TABLE
BLYTHE AIRPORT (23158)
BLYTHE, CA
(11/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 395 ft. above sea level
Latitude: 33.618
Longitude: -114.714
Data Version: VER3

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp (F)	Dry Bulb Temp (C)	Wet Bulb Temp (F)	Wet Bulb Temp (C)	Dew Point Temp (F)	Dew Point Temp (C)	Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
15	0052	12	CLR	10.00		54	12.2	49	9.4	44	6.7	69	0	000		29.50			29.90	AA		29.92
15	0152	12	CLR	10.00		53	11.7	49	9.1	44	6.7	72	6	010		29.50			29.91	AA		29.92
15	0252	12	CLR	10.00		53	11.7	49	9.1	44	6.7	72	6	320		29.51			29.91	AA		29.93
15	0352	12	CLR	10.00		53	11.7	49	9.1	44	6.7	72	5	010		29.52			29.92	AA		29.94
15	0452	12	CLR	10.00		51	10.6	47	8.3	43	6.1	74	3	350		29.52			29.93	AA		29.94
15	0552	12	CLR	10.00		51	10.6	47	8.3	43	6.1	74	3	300		29.55			29.96	AA		29.97
15	0652	12	CLR	10.00		53	11.7	48	8.9	43	6.1	69	5	340		29.57			29.98	AA		29.99
15	0752	12	CLR	10.00		58	14.4	51	10.7	45	7.2	62	3	060		29.58			29.99	AA		30.00
15	0852	12	CLR	10.00		63	17.2	54	12.4	47	8.3	56	0	000		29.60			30.01	AA		30.02
15	0952	12	CLR	10.00		68	20.0	57	13.9	48	8.9	49	5	170		29.56			29.97	AA		29.98
15	1052	12	CLR	10.00		71	21.7	59	15.0	50	10.0	48	3	170		29.55			29.96	AA		29.97
15	1152	12	CLR	10.00		75	23.9	60	15.6	49	9.4	40	9	180		29.51			29.92	AA		29.93
15	1252	12	CLR	10.00		77	25.0	62	16.5	51	10.6	40	13	190		29.48			29.88	AA		29.90
15	1352	12	CLR	10.00		81	27.2	60	15.3	42	5.6	25	14	190		29.45			29.85	AA		29.87
15	1452	12	CLR	10.00		81	27.2	58	14.7	39	3.9	22	16	240	23	29.44			29.84	AA		29.86
15	1552	12	CLR	10.00		79	26.1	57	14.0	38	3.3	23	15	230		29.42			29.83	AA		29.84
15	1652	12	CLR	10.00		75	23.9	58	14.4	44	6.7	33	10	230		29.43			29.84	AA		29.85
15	1752	12	CLR	10.00		73	22.8	59	14.7	47	8.3	40	8	220		29.43			29.84	AA		29.85
15	1852	12	CLR	10.00		72	22.2	58	14.5	47	8.3	41	9	220		29.42			29.83	AA		29.84
15	1952	12	CLR	10.00		68	20.0	57	13.6	47	8.3	47	5	180		29.44			29.85	AA		29.86
15	2052	12	CLR	10.00		67	19.4	56	13.4	47	8.3	49	9	200		29.44			29.85	AA		29.86
15	2152	12	CLR	10.00		65	18.3	55	12.6	46	7.8	50	6	230		29.44			29.84	AA		29.86
15	2252	12	CLR	10.00		61	16.1	53	11.4	45	7.2	56	6	010		29.44			29.85	AA		29.86
15	2352	12	CLR	10.00		59	15.0	52	10.9	45	7.2	60	0	000		29.45			29.86	AA		29.87

Dynamically generated Fri Feb 17 14:18:51 EST 2017 via http://www.ncdc.noaa.gov/qclcd/QCLCD

FIGURE B-69
IMPERIAL COUNTY AIRPORT QCLCD — NOVEMBER 15 & 16

QUALITY CONTROLLED Local Climatological Data: IMPERIAL COUNTY AIRPORT

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final)
HOURLY OBSERVATIONS TABLE
IMPERIAL COUNTY AIRPORT (03144)
IMPERIAL, CA
(11/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: -58 ft. below sea level
Latitude: 32.834
Longitude: -115.578
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp (F)	Dry Bulb Temp (C)	Wet Bulb Temp (F)	Wet Bulb Temp (C)	Dew Point Temp (F)	Dew Point Temp (C)	Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
16	0053	12	CLR	10.00		60	15.6	51	10.5	42	5.6	52	9	280		29.94			29.88	AA		29.88
16	0153	12	CLR	7.00		65	18.3	54	12.4	45	7.2	49	8	310		29.97			29.91	AA		29.91
16	0253	12	CLR	6.00	HZ	64	17.8	54	12.2	45	7.2	50	8	310		30.01			29.95	AA		29.95
16	0353	12	CLR	10.00		66	18.9	56	13.2	47	8.3	51	9	340		30.04			29.98	AA		29.98
16	0453	12	CLR	10.00		65	18.3	53	11.7	42	5.6	43	16	350		30.08			30.01	AA		30.02
16	0553	12	CLR	10.00		63	17.2	52	10.8	40	4.4	43	9	010		30.13			30.07	AA		30.07
16	0653	12	CLR	10.00		62	16.7	49	9.3	34	1.1	35	7	020		30.18			30.12	AA		30.12
16	0753	12	CLR	7.00		64	17.8	48	9.1	30	-1.1	28	14	050		30.23			30.17	AA		30.17
16	0853	12	BKN027	4.00	HZ	67	19.4	47	8.5	21	-6.1	17	14	360		30.26			30.20	AA		30.20
16	0916	12	SCT027	4.00	HZ	68	20.0	47	8.4	18	-7.8	15	23	010	32	30.26			M	SP		30.20
16	0953	12	CLR	4.00	HZ	68	20.0	46	8.0	14	-10.0	12	21	360	31	30.27			30.21	AA		30.21
16	1050	12	SCT023	2.00	HZ	70	21.0	47	8.5	14	-10.0	11	24	340	31	30.26			M	SP		30.20
16	1053	12	SCT023	1.75	HZ	68	20.0	46	8.0	14	-10.0	12	29	340	34	30.26			30.20	AA		30.20
16	1104	12	SCT025	3.00	HZ	69	20.6	47	8.0	12	-11.1	11	22	350	31	30.26			M	SP		30.20
16	1153	12	CLR	10.00		69	20.6	46	7.8	9	-12.8	9	21	350	28	30.25			30.19	AA		30.19
16	1253	12	CLR	10.00		70	21.1	46	7.5	1	-17.2s	6	17	350	23	30.23			30.17	AA		30.17
16	1353	12	CLR	10.00		70	21.1	46	7.6	3	-16.1	7	17	010		30.22			30.16	AA		30.16
16	1453	12	CLR	10.00		69	20.6	46	7.9	10	-12.2	10	14	330	23	30.21			30.15	AA		30.15
16	1553	12	CLR	10.00		68	20.0	46	7.7	11	-11.7	11	9	340		30.22			30.15	AA		30.16
16	1653	12	CLR	10.00		64	17.8	45	7.1	16	-8.9	15	7	350		30.22			30.16	AA		30.16
16	1753	12	CLR	10.00		61	16.1	44	6.6	19	-7.2	20	6	040		30.23			30.17	AA		30.17
16	1853	12	CLR	10.00		60	15.6	41	5.0	6	-14.4	11	6	030		30.25			30.19	AA		30.19
16	1953	12	CLR	10.00		57	13.9	39	4.0	5	-15.0	12	7	030		30.26			30.20	AA		30.20
16	2001	12	FEW002	7.00		58	14.4	40	4.3	4	-15.6	11	8	010		30.26			M	SP		30.20
16	2053	12	CLR	10.00		51	10.6	37	3.0	13	-10.6	22	7	280		30.29			30.22	AA		30.23
16	2153	12	CLR	10.00		47	8.3	37	2.7	20	-6.7	34	7	240		30.29			30.23	AA		30.23
16	2253	12	CLR	10.00		48	8.9	37	3.0	20	-6.7	33	6	300		30.29			30.23	AA		30.23
16	2353	12	CLR	10.00		47	8.3	37	2.8	21	-6.1	36	6	280		30.28			30.22	AA		30.22

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QUALITY CONTROLLED Local Climatological Data: IMPERIAL COUNTY AIRPORT

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (final)
HOURLY OBSERVATIONS TABLE
IMPERIAL COUNTY AIRPORT (03144)
IMPERIAL, CA
(11/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: -58 ft. below sea level
Latitude: 32.834
Longitude: -115.578
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
15	0053	12	CLR	10.00		59	15.0	53	11.5	47	8.3	65	6	310		29.97			29.91	AA		29.91
15	0153	12	CLR	10.00		57	13.9	51	10.7	46	7.8	67	0	000		29.97			29.91	AA		29.91
15	0253	12	CLR	10.00		56	13.3	51	10.4	46	7.8	69	7	250		29.98			29.92	AA		29.92
15	0353	12	CLR	10.00		56	13.3	50	9.9	44	6.7	64	0	000		29.99			29.92	AA		29.93
15	0453	12	CLR	10.00		56	13.3	50	9.9	44	6.7	64	3	200		30.00			29.93	AA		29.94
15	0553	12	CLR	10.00		55	12.8	50	9.7	44	6.7	67	0	000		30.01			29.95	AA		29.95
15	0653	12	CLR	10.00		55	12.8	50	9.7	44	6.7	67	0	000		30.04			29.97	AA		29.98
15	0753	12	CLR	8.00		61	16.1	55	12.5	49	9.4	65	5	260		30.04			29.98	AA		29.98
15	0853	12	CLR	9.00		66	18.9	58	14.5	52	11.1	61	0	000		30.05			29.98	AA		29.99
15	0953	12	CLR	8.00		70	21.1	60	15.4	52	11.1	53	0	000		30.03			29.97	AA		29.97
15	1053	12	CLR	10.00		74	23.3	61	16.2	52	11.1	46	0	000		30.02			29.96	AA		29.96
15	1153	12	CLR	10.00		76	24.4	61	16.1	50	10.0	40	6	VR		29.98			29.92	AA		29.92
15	1253	12	CLR	9.00		79	26.1	62	16.5	49	9.4	35	7	150		29.95			29.89	AA		29.89
15	1353	12	CLR	10.00		80	26.7	61	16.2	47	8.3	31	8	180		29.93			29.86	AA		29.87
15	1453	12	CLR	10.00		80	26.7	61	16.2	47	8.3	31	3	210		29.91			29.85	AA		29.85
15	1553	12	CLR	10.00		79	26.1	61	16.3	48	8.9	34	3	VR		29.91			29.85	AA		29.85
15	1653	12	CLR	10.00		74	23.3	60	15.7	50	10.0	43	5	280		29.91			29.85	AA		29.85
15	1753	12	CLR	10.00		72	22.2	57	13.6	43	6.1	35	6	280		29.91			29.85	AA		29.85
15	1853	12	CLR	10.00		70	21.1	56	13.4	44	6.7	39	9	300		29.92			29.86	AA		29.86
15	1953	12	CLR	10.00		68	20.0	56	13.4	46	7.8	45	11	300		29.95			29.88	AA		29.89
15	2053	12	CLR	10.00		68	20.0	55	12.9	44	6.7	42	16	280		29.94			29.88	AA		29.88
15	2153	12	CLR	10.00		64	17.8	54	12.0	44	6.7	48	7	280		29.95			29.88	AA		29.89
15	2253	12	CLR	10.00		63	17.2	53	11.7	44	6.7	50	9	270		29.93			29.87	AA		29.87
15	2353	12	CLR	10.00		62	16.7	52	11.2	43	6.1	50	6	300		29.92			29.86	AA		29.86

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FIGURE B-70
TWENTYNINE PALMS (KNXP) QCLCD — NOVEMBER 15 & 16

2/17/2017 QUALITY CONTROLLED Local Climatological Data: TWENTY NINE PALMS

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA (may be updated)
HOURLY OBSERVATIONS TABLE
TWENTY NINE PALMS (93121)
TWENTY NINE PALMS, CA
(11/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 2051 ft. above sea level
Latitude: 34.3
Longitude: -116.166
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
15	0056	5	CLR	10.00		58	14.4	47	8.5	36	2.2	44	15	290		27.63			29.95	AA		30.03
15	0156	5	CLR	10.00		56	13.3	47	8.2	37	2.8	49	5	280		27.63			29.95	AA		30.03
15	0256	5	CLR	10.00		55	12.8	46	7.7	36	2.2	49	7	260		27.63			29.95	AA		30.03
15	0356	5	CLR	10.00		58	14.4	47	8.5	36	2.2	44	9	310		27.64			29.96	AA		30.04
15	0456	5	CLR	10.00		55	12.8	46	7.5	35	1.7	47	3	VR		27.65			M	AA		30.05
15	0556	5	CLR	9.00		53	11.7	44	6.7	34	1.1	49	5	360		27.66			30.00	AA		30.06
15	0656	5	CLR	7.00		53	11.7	44	6.7	34	1.1	49	3	350		27.68			30.02	AA		30.08
15	0756	5	FEW080	10.00		61	16.1	48	8.6	33	0.6	35	7	310		27.69			30.02	AA		30.09
15	0856	5	FEW100	10.00		62	16.7	48	8.9	33	0.6	34	0	000		27.67			30.01	AA		30.07
15	0956	5	FEW100	10.00		66	18.9	50	9.8	33	0.6	29	6	030		27.67			30.00	AA		30.07
15	1056	5	FEW100	10.00		69	20.6	50	9.7	28	-2.2	22	0	000		27.65			29.98	AA		30.05
15	1156	5	FEW100	10.00		71	21.7	50	9.8	26	-3.3	19	0	000		27.63			29.95	AA		30.02
15	1256	5	FEW100	10.00		72	22.2	50	10.1	26	-3.3	18	5	070		27.60			29.92	AA		30.00
15	1356	5	FEW100	10.00		75	23.9	52	10.9	27	-2.8	17	9	020		27.59			29.90	AA		29.98
15	1456	5	FEW100	10.00		74	23.3	52	10.9	28	-2.2	18	9	340		27.58			29.89	AA		29.97
15	1556	5	FEW100	7.00		72	22.2	50	9.8	24	-4.4	16	22	300	30	27.57			29.88	AA		29.96
15	1656	5	FEW100	5.00	HZ	69	20.6	49	9.2	25	-3.9	19	15	300		27.57			M	AA		29.96
15	1756	5	CLR	10.00		69	20.6	49	9.3	26	-3.3	20	21	310		27.56			29.88	AA		29.95
15	1856	5	CLR	7.00		68	20.0	50	9.8	30	-1.1	24	16	320	29	27.60			29.91	AA		29.99
15	1956	5	CLR	10.00		64	17.8	50	10.2	37	2.8	37	13	310		27.60			29.92	AA		29.99
15	2056	5	CLR	9.00		61	16.1	49	9.4	37	2.8	41	23	300	31	27.60			M	AA		30.00
15	2156	5	CLR	8.00		60	15.6	48	9.0	36	2.2	41	22	310		27.60			29.92	AA		30.00
15	2210	5	FEW005	2.50	HZ	61	16.1	48	8.8	34	1.1	36	33	310	38	27.60			M	SP		30.00
15	2231	5	CLR	5.00	HZ	61	16.1	47	8.2	31	-0.6	32	31	310	38	27.60			M	SP		30.00
15	2256	5	CLR	8.00		60	15.6	46	7.9	31	-0.6	34	15	310	28	27.63			29.94	AA		30.03
15	2356	5	CLR	5.00	HZ	60	15.6	47	8.1	32	0.0	35	33	310	40	27.66			29.97	AA		30.06

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U.S. Department of Commerce
National Oceanic & Atmospheric Administration

QUALITY CONTROLLED LOCAL CLIMATOLOGICAL DATA
(may be updated)
HOURLY OBSERVATIONS TABLE
TWENTY NINE PALMS (93121)
TWENTY NINE PALMS, CA
(11/2014)

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801

Elevation: 2051 ft. above sea level
Latitude: 34.3
Longitude: -116.166
Data Version: VER2

Date	Time (LST)	Station Type	Sky Conditions	Visibility (SM)	Weather Type	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Humd %	Wind Speed (MPH)	Wind Dir	Wind Gusts (MPH)	Station Pressure (in. hg)	Press Tend	Net 3-hr Chg (mb)	Sea Level Pressure (in. hg)	Report Type	Precip. Total (in)	Alti-meter (in. hg)
						(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
16	0056	5	CLR	10.00		58	14.4	46	7.8	33	0.6	39	22	300	31	27.70			30.02	AA		30.10
16	0156	5	CLR	10.00		57	13.9	46	7.8	34	1.1	42	20	300		27.75			30.07	AA		30.15
16	0256	5	CLR	10.00		55	12.8	45	7.2	34	1.1	45	10	310		27.78			30.11	AA		30.19
16	0356	5	CLR	10.00		55	12.8	44	6.6	31	-0.6	40	15	320		27.80			30.14	AA		30.21
16	0456	5	BKN028	8.00		52	11.1	42	5.2	28	-2.2	40	13	300		27.84			30.17	AA		30.25
16	0509	5	SCT026	7.00		54	12.2	41	4.9	23	-5.0	30	15	310	29	27.84			M	SP		30.25
16	0556	5	BKN036	7.00		52	11.1	37	2.8	12	-11.1	20	14	310		27.86			30.20	AA		30.27
16	0656	5	FEW120	5.00	HZ	51	10.6	35	1.5	1	-17.2	13	11	330		27.92			30.27	AA		30.34
16	0704	5	FEW120	5.00	HZ	50	10.0	34	1.2	1	-17.2	13	11	350		27.92			M	SP		30.34
16	0756	5	FEW120	6.00	HZ	51	10.6	35	1.5	1	-17.2	13	18	340	26	27.94			30.30	AA		30.36
16	0856	5	FEW180	10.00		52	11.1	36	2.0	3	-16.1	13	18	330		27.97			30.33	AA		30.39
16	0956	5	FEW180	10.00		54	12.2	37	2.7	4	-15.6	13	13	340	22	27.96			30.32	AA		30.38
16	1056	5	FEW180	10.00		56	13.3	38	3.1	2	-16.7	11	14	360	26	27.96			30.32	AA		30.38
16	1156	5	FEW180	10.00		57	13.9	38	3.5	3	-16.1	11	10	360	22	27.95			30.30	AA		30.37
16	1256	5	FEW180	10.00		57	13.9	38	3.3	-0	-17.8	10	18	350	25	27.94			30.29	AA		30.36
16	1356	5	CLR	10.00		58	14.4	38	3.5	-1	-18.3	9	11	360	23	27.91			30.27	AA		30.33
16	1456	5	FEW180	10.00		58	14.4	38	3.4	-2	-18.9	8	14	360		27.91			30.27	AA		30.33
16	1556	5	FEW080 FEW180	10.00		56	13.3	37	2.8	-2	-18.9	9	10	360		27.91			30.26	AA		30.32
16	1656	5	SCT200	9.00		54	12.2	36	2.2	-3	-19.4	9	13	340		27.91			30.28	AA		30.33
16	1756	5	FEW200	9.00		52	11.1	35	1.5	-4	-20.0	10	10	320		27.92			30.29	AA		30.34
16	1856	5	FEW200	10.00		52	11.1	35	1.5	-4	-20.0	10	11	300		27.93			30.30	AA		30.35
16	1956	5	CLR	10.00		49	9.4	33	0.5	-5	-20.6	10	13	290		27.94			30.31	AA		30.36
16	2056	5	CLR	10.00		47	8.3	32	-0.0	-5	-20.6	11	13	280		27.95			30.32	AA		30.37
16	2156	5	CLR	10.00		47	8.3	32	-0.0	-5	-20.6	11	11	270		27.96			30.33	AA		30.38
16	2256	5	CLR	10.00		47	8.3	32	-0.0	-5	-20.6	11	6	320		27.96			30.33	AA		30.38
16	2356	5	CLR	10.00		46	7.8	31	-0.4	-5	-20.6	11	8	280		27.94			30.31	AA		30.36

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